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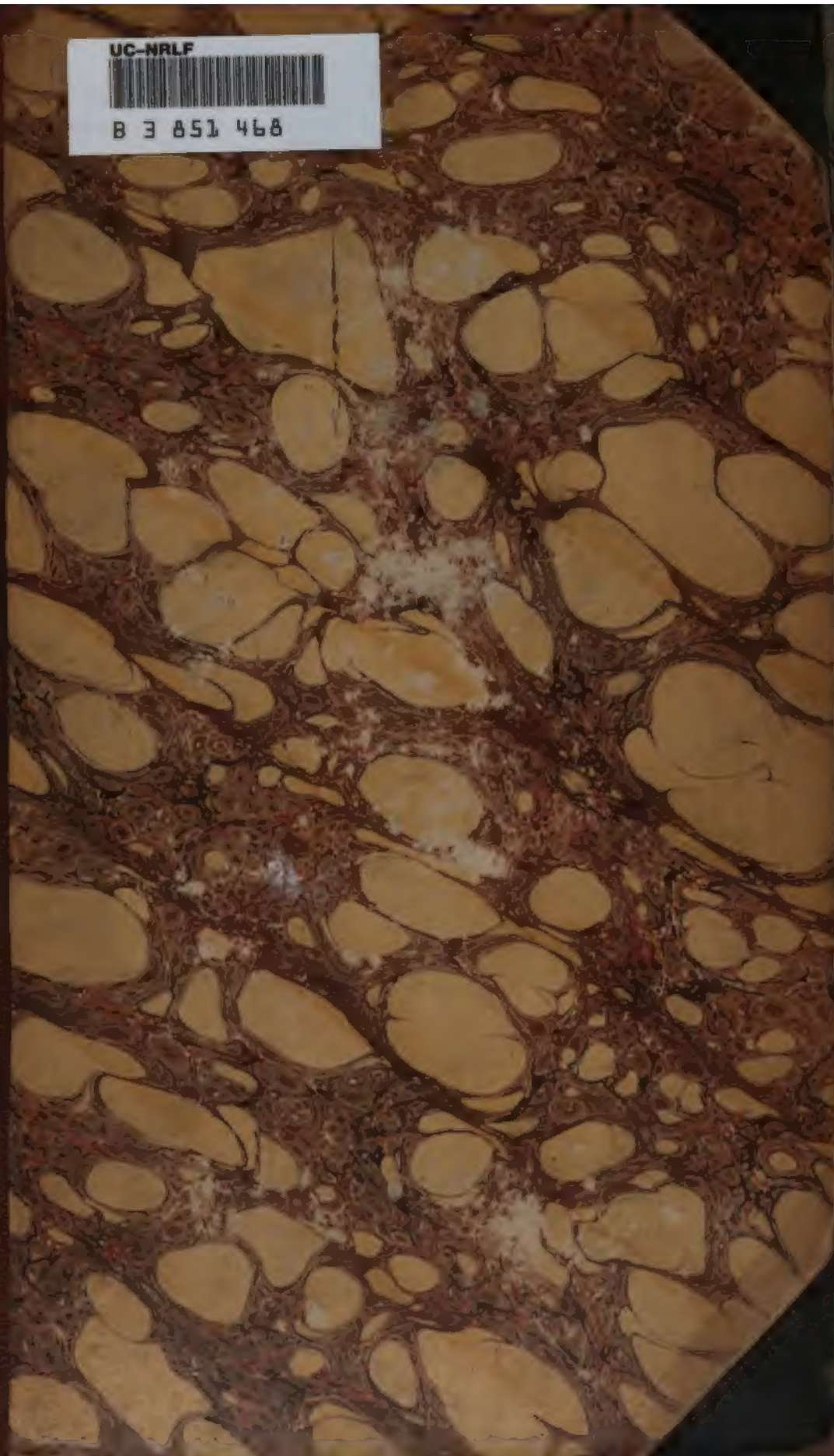
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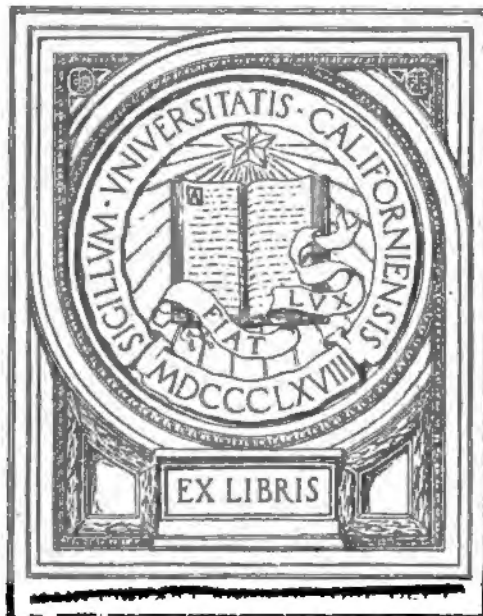
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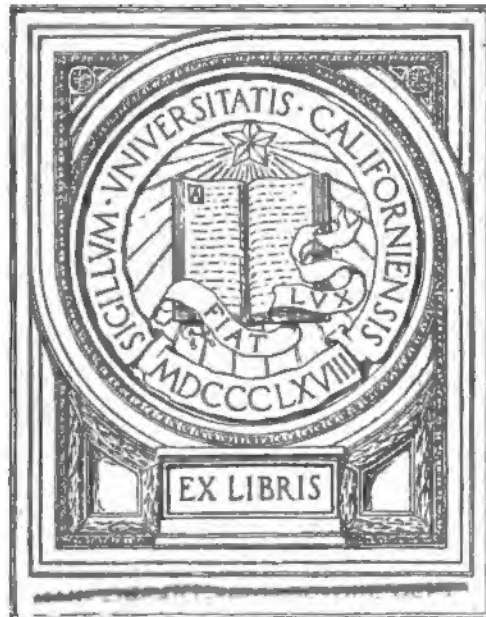
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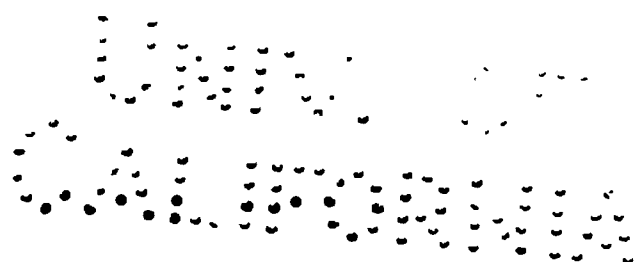
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THE
WESTERN
HORTICULTURAL REVIEW:

DEVOTED TO



HORTICULTURE, POMOLOGY, GRAPE CULTURE, WINE MANUFACTURE,
RURAL ARCHITECTURE, LANDSCAPE GARDENING,
ENTOMOLOGY, METEOROLOGY, ETC.

J. A. WARDER, M.D., EDITOR.

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UNION OF
CALIFORNIA



University of Wisconsin.

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Vol. II.

OCTOBER, 1851.

No. 1.

OPENING OF THE SECOND VOLUME.

ONE year ago this periodical modestly set foot upon the public arena, a candidate for popularity. Without any flourish of trumpets, or clash of arms, but quietly and without boasting, the entrée was made, as it was not expected that the castle of public favor would be scaled, either by an assumption of force, nor by an array of overweening promises.

All that was attempted has been realized, and perhaps more—at any rate, all that was anticipated in the production has quite equalled the anticipations of the conductor, at least, who, perhaps, knew better than the many kind readers, how much ability would be brought to bear upon the enterprise, and he is forced modestly to confess that he has been agreeably disappointed in the result—nor is this uttered in any spirit of boasting—no man knows his capabilities until he is tried; a new business may open before him, but, until an effort is made, he can not tell what success may await him.

It is true, certain promises were made at the outset, with regard to which silence may now be the most potent argument; but I may be allowed to assert they have been realized, and that great efforts have been made to give satisfaction to the kind readers of these

pages, not only by the editor himself, but also by many excellent friends, who have continued to lend their valuable aid, without which the interest must have flagged—but it is not for me to boast either of my own efforts or of theirs.

One great encouragement that constantly urges me onward, is the consciousness that an extended field of usefulness is before me, in which I may freely exert myself, with the assurance that even though the field be very wide, like too large farms in parts of our country, it must needs be slighted in its culture, instead of being thoroughly tended and cropped, still, its geniality and richness of soil, will render it capable of yielding a large return, even for the moderate abilities and slender efforts that may be made to work upon it.

The *WESTERN HORTICULTURAL REVIEW* is again presented to the public, on the commencement of a new era in its existence—at the commencement of its second year. That it will be sustained, there can not be a particle of doubt; how well, remains to be proved, and the solution of that problem will depend upon the efforts made in its behalf, not only in the editorial chair, but also in the other important field of labor, wherein

others must work, since there the hands and tongue of the editor are tied by notions of delicacy, whether true or false. Here, then, the greatest aid may be rendered by willing friends, who will not be called on in vain. I am satisfied that there is an abundant harvest to be reaped, if these willing friends will only exert themselves. The mighty west and south-west have relations of soil and climate that require peculiar study, and consequently peculiar methods. These are the objects of this work—to unfold and to portray. We have also a taste for the beautiful and excellent, to create, to foster, and to direct among our people.

In these pages, during the current, and I trust many future years, if life and strength be spared, and if the necessary encouragement be extended at your hands, there will be a constant development of facts and principles, with their application to modes of practice, that will conduce to the great advancement of the science of Horticulture, and consequently to the *art* of Gardening. Science and art, as is well known, are ever to be co-laborers when they would succeed, no matter in what department; they must always go hand-in-hand, since the one is mere "book-learning," if attempted alone by the greatest philosopher, and the other, in our department, is but the limited knowledge of the clod-pole, unless wisely directed; and though, in our favored clime and country, it may sometimes succeed in enabling the gardener to amass wealth by his success, it very soon appears that this apparent advance is owing, either to the want of opposition wherewith to compare his progress, or, more frequently, to the possession of those natural qualities which have enabled him to grasp the important facts for himself, and from them to deduce the principles which he is constantly applying for the benefit of his *art*.

Pomology is a very important topic, to

which much space must necessarily be devoted, and much time will be required to attend to this interest. In the west we have very many excellent fruits, that have sprung up since the settlement of our extended region—they have generally been the result of accident, but as science pervades this department of art, the wonderful effects of the ingenious art of hybridizing will be more and more frequently developed. Already many very happy results have followed the efforts made by some of the pioneers in this pursuit—and encouragement is constantly extended to others to make efforts to produce new crosses, and to combine the excellencies of different varieties. Of those already brought into notice, the cherries of Cleveland, and the strawberries of Cincinnati and Columbus, may be mentioned as examples—the next developments will be upon the grape, and the Horticultural society of this city has offered large premiums for new varieties to be produced by judicious crossing, so as to combine the excellencies of all in the production of superior fruit for the table and for the vintage.

One word more, dear friends and readers, in this annual salutation. These pages can not be entirely filled with original matter, nor is it desirable that they should be so occupied. The scissors must be brought into requisition to furnish matter already presented to the public—but which may not have come beneath your eyes. There are those, however, who will feel annoyed at beholding the same articles here that they have already perused elsewhere. Much forbearance is no doubt required on the part of those who possess all these advantages of reaping information, but their aid and comfort is needed not only by the editor, but also by many of his less fortunate readers. Render it cheerfully then, my well-endowed friends, and with it a frequent ray of your own original effulgence, and it shall be amply repaid, and most

willingly, in the improved character of the work, the determination being to render this periodical more and more perfect, as the means are furnished to make it more and more worthy of the support and confidence of the public.

RIPENING AND PRESERVING FRUIT.

A METHOD of ripening and preserving fruit has been discovered by Mr. Daniel T. Curtis, of Boston, which promises to be of inestimable value to all cultivators and all lovers of fine fruit; and this, we take it, embraces the civilized world.

What is the process, we are not informed, although assured by him that is not expensive or inconvenient, and is adapted, with equal ease, to large or small quantities of fruit or vegetables; and, if we remember rightly it can be applied to the preservation of milk and all articles of food.

Specimens of fruit prepared by Mr. Curtis, have been, from time to time, presented by him to the Massachusetts Horticultural Society, long after the usual period of ripening; and they were found, in all cases, to be "perfectly sound, and frequently to have retained, unimpaired, their juice and flavor." Mr. Curtis stated—which, indeed, was evident—that the specimens generally were immature and imperfect when delivered into his hands for experiment.

Pears prepared by Mr. Curtis have also been sent with safety to California, to Havana, and to the London Horticultural Society, which has awarded him its Knightian Medal.

We copy from the report of a committee of the Massachusetts Horticultural Society:

"From the facts now detailed, as well as from their own observations, your committee feel justified in expressing a confident opinion, that after many unsuccessful trials of various processes and different methods, Mr. Curtis has succeeded in discovering a method of preserving fruit for a very long, if not for any desired period, and that this method is capable of a practical application.

"Although Mr. Curtis has, as he states, preserved other varieties of fruits, besides pears, yet so far as the personal knowledge of the committee extends, the fruit subjected to his process has thus far been mainly of the latter description, and they feel, before arriving at a conclusive opinion respecting the

value of this discovery to the society, that experiments with other species of fruits, as peaches, plums, etc., should be made, and an opportunity be offered for their examination, after being subjected to the process. With a view to the gratification of the committee in this particular, Mr. Curtis is about commencing, under their inspection, some experiments with the early and soft fruits, to be continued as they come into season.

"In addition to the discovery of a mode of preserving fruit, Mr. Curtis seems also to have succeeded in finding out a process by which such varieties as are difficult to ripen may be brought to perfection—a discovery of almost as much interest to cultivators, as that by which the season of all varieties is so greatly prolonged, and their safe transmission to distant places secured.

"That the discoveries of Mr. Curtis are important, and that he is justly entitled to an honorary and pecuniary recompense at the hands of the society, as well as that a knowledge of the process, should be, if possible, procured for the use of its members, your committee entertain no doubt, and they believe that it will be but fulfilling some of the objects for which it was instituted, in testifying, by such recompense, a proper appreciation of the merits and discoveries of Mr. Curtis, and in procuring for the public the means of availing itself of the advantages to be derived therefrom.

"Under existing circumstances, however, while they wish now to place on record such evidence of the claims of Mr. Curtis as is afforded by this expression of their opinion and statement of facts, your committee are of opinion that the final action of the society in relation to the matter should be delayed until the results of the experiments referred to are ascertained, and such further information with respect to the expense attending the process, and mode of practicing it, procured, as will enable them, in view of the beneficial results of which it is capable, the better to recommend, and the society to

adopt, such measures in relation to these discoveries, as Mr. Curtis seems to deserve, and its own interest to demand.

"With these views your committee ask that the whole subject may yet be left in

their hands, and that further time be allowed them to consider what action it is proper that the society should take in reference thereto.

JOSEPH S. CABOT, Chairman."

Journal of Agriculture.

LETTERS FROM DR. KENNICOTT.

Madison, Wis. July, 1851.

DEAR FRIEND: Do you observe the engraving at the head of this letter?* Five noble, though rather stiff and formal structures of the lime rock that underlies much of this region, and crops out near by: now, please imagine, what the artist could not show, in this simple "PLAN OF THE UNIVERSITY OF THE STATE OF WISCONSIN,"—that the buildings occupy the crown and brow of a moundlike hill, 125 feet above the waters of a clear lake washing its base, and overlooking one of the most picturesque and delicious prospects I ever beheld.

There is, in general, but little of the picturesque in western towns; most of them lacking two essential features—a foreground of water, bounded by a back ground of hills—and now let us glance at this delightful exception of the common utilitarian rules and accidents that govern the founding of cities.

The site of MADISON—the capital of Wisconsin—was selected by the eye of taste, and souls that could look beyond dusty streets, and walls of brick and stone, and appreciate the many surpassing elements of fitness, beauty, health and comfort, that a beneficent Creator had here united in the solitudes of an unbroken wilderness. It required great minds to choose this place and disregard the claims of others, with more of the usual accessories of commerce and manufactures, so dear to the calculating Yankee.

Madison is situated on a narrow strip of

land, between "Third" and "Fourth" lakes—the latter, the largest of the chain, is about nine miles by six—the water, from springs, is clear and cool—the bottom clean and gravelly, and the shores *dry*, though much diversified—often gently sloping—sometimes stretching out into long low wooded points, that look like islands, and now and then, rising into bold rocky promontories, almost startling in their solitary cliff-like grandeur; and every where—on rocky headland or gently rolling shore, is a deep green fringe of native trees; and then away in the dim distance rise the BLUE MOUNDS—a thousand feet above the rapid Wisconsin—while the nearer hills fill up a picture of the loveliest spot in the whole West.

But what has all this to do with Horticulture? Let us see. The questions of taste, fitness, utility—indeed, everything relating to the composition of HOME, are now legitimate subjects of our delightful science, so I will fill no space with arguments. But I have another thought—a professional one too—connected with the heading of this letter, on which I must spill a little ink. Those intrusted with the management of the University have had the wisdom to purchase a little farm, at the bottom of the hill; and one of these men—Simeon Mills—whom I had the good fortune to meet, is a successful *Horticulturist*, and he informed me, that his brethren in the management were enlightened individuals, who would join with him in converting this "farm" into an ORCHARD

* See Frontispiece.

AND GARDEN, for the lasting benefit of the pupils of the institution; and they have already taken measures to preserve the growth of the thrifty young oaks that clothe the hill to the very base of the buildings.

God grant them the great wisdom and the exceeding liberality to carry out this beneficent idea, and thus give their own, and the children of the State, in all time to come, fruitful and glad occasion to "keep green their memories," as they often season the sometimes hard and dry mental food, of their *alma mater*, with the juicy APPLE and buttery PEAR, beneath the shade of trees to which time shall bring more grace and beauty, while the immortalized planters sleep in the common grave, but with a million youthful blessings on their honored heads.

But now for my pet thought, which it would be well, perhaps, for those who legislate, and those who teach, to ponder long and well, before they pass it by, as the offspring of an enthusiastic imagination.

You and I know that Downing was right when he said, "a man born in one of the largest gardens, and upon the banks of one of the noblest rivers in America, ought to have a natural right to talk about fruit trees." And he might, with truth, have added—and all matters relating to rural and creative taste—the fine arts, and even belles-letters.

As solitary scenes of grandeur and sublimity breed poets, so does such a prospect as I have attempted rapidly to sketch from the top of "College Hill," and the orchard and garden that I trust will, ere long, brighten the foot of it, create and foster feelings of gratitude, and RELIGION, and beget a taste for the beautiful and the congruous, and give food for thought, and lessons in refinement, that must make the young purer and better, wiser and happier, and every way more fitted to enjoy and adorn this life, and perfect "the hope that is in us," that we are here as

plants in a nursery garden, to be transferred when worthy, to our permanent home in heaven, where every capacity may find room for full development, unlimited by time, and unchecked by the laws that govern matter.

But this sermon also is ended, and I will not promise not to renew it, though I think I shall only give you a few of the strictly horticultural facts that I may pick up, during my rapid journeyings through this interesting region.

Truly, your friend,

JOHN A. KENNICOTT.

Beloit, Wis., July, 1851.

DEAR DOCTOR:—I have a whole day at this place, and being sufficiently fatigued by several long walks, I will try and occupy my resting spell in giving you another outline sketch of portions of southern Wisconsin and its Horticulture; and if I do not interest you, it will not be from lack of interest in my subject.

These Rock River towns are all thriving yankee villages, fast assuming the consequence of cities. Indeed, at Janesville, where I was yesterday, I heard much talk of rivaling MILWAUKIE. I admire their spirit, and confess that I can see no good reason why they should not, one day, be to Milwaukee, what Rochester, N. Y., is to Buffalo or Albany.

But to my horticultural sketches: I have been over this region on five stage routes, but traveling night and day, and always "through without stopping," I have had but a bird's-eye view of most of it, and little time to visit nurseries or gardens; and yet I have picked up a few important facts, and seen some things worth coming to see.

In my own state and county, we have the "Garden City"—a proud boast, and not altogether undeserved—and yet I fancy, if seen together, some of the Wisconsin towns could show gardens that would put ours to the

blush. I have seen several here that need not fear comparison with our best; and then at Racine, I visited the most perfect little gem of a garden that I ever saw in my life; and though I do not intend to glorify individuals, or draw invidious distinctions, yet I must mention the name of our professional brother, Dr. P. R. Hox, who has succeeded in creating the very beau ideal of a city flower garden, though containing many of our most delicate and beautiful native plants, instead of more showy and fashionable exotics. Among the natives I saw a patch of the *Dodecatheon*, but little shaded, which had flowered most richly, and on very tall scapes, much finer than natural; the effect, as the Doctor says, of an abundant supply of leaf-mold, and shaping the large and dense umbril with the scissors.

Well, now, my friend, I am really inclined to believe that this southern Wisconsin is, upon the whole, a better fruit country than our northern Illinois; and the difference in its favor is to be found in *soil*, alone; for it is certainly colder here than in Illinois, and the general meteorological phenomena in no way more favorable.

This soil is very unlike ours further south, in every sensible property. It is, in general, a drift formation, over loose rolled pebbles, seamy lime rock, sand stone, etc., and, of course, naturally and *perfectly drained*, especially on the steep wooded hills, and the frequent "swells," or "rolls," which, on *Rock Prairie*, often rise into respectable hills, with outlines the most rounded and curves the most graceful ever seen on earth's green surface.

It is this sandy lime stone—always *dry at bottom*, and yet sufficiently retentive of incorporated moisture, and just rich enough in organized materials to perfect an early and healthy growth of wood—that gives this region its promised superiority as a fruit country; and then this soil can be easily worked,

and worked at all times, and kept clear of weeds—a great thing in gardening.

But for a few facts: as far north as Madison, I saw the Peach and Cherry, as little affected by winter-killing as in Illinois, and the latter perfecting fruit; and more, the Falstaff and Antwerp Raspberries are in full bearing, and were left unprotected during the winter; while every cane of mine, so left, was killed to the ground. And here, in Beloit, I find on a high bluff quite a show of fruit on young healthy Peach trees—a thing that has not happened on our own deep black loam, these three years past, though we have ten Peach orchards in northern Illinois to one in Wisconsin. And here, also, is the Catawba Grape, as healthy and productive as on the Illinois river bluffs, and I am told, perfecting its fruit as well as in Ohio.

Such is not the case this year, nor was it last, a degree south of Beloit. Depend upon it, this is the right kind of soil for the Grape and the Peach, and I think for the *Pear* and *Cherry*, too, for the trees I have seen are bearing abundantly.

We do not value drainage as we ought, and we pay too little attention to the properties of the soil in planting orchards for profit. Now, these gravel knolls are worthless for grain or grass, except, perhaps, clover, well plastered to enrich them; and yet, I make no question that on their north and west sides, the peach will succeed to admiration; and on their south and east aspects, if not the Catawba, some other Grape yet to be found, will ere long be cultivated for wine.

For us, who own farms of the deep black prairie muck, we must *under-drain*, and, perhaps, then content ourselves with excelling in that standard fruit, the apple, and, it may be, in producing *Flax Cotton*, should this great thought prove no humbug—for if true and practical, our damp rich soil has found its best crop in the north, and the

destiny of our beautiful Prairie State is no longer problematical.

And now let me close this rapid letter with a bit of rhapsody. I once heard a Wisconsin orator liken his new state—it was a long time ago—to a young bride, in virgin robes, awaiting the embraces of her husband, as she modestly reclined between the Mississippi and the Lake, with the breath of the sighing pines of the north cooling one cheek, while the rude sun of the south raised hot blushes on the other.

I have forgotten his words, but I give you a part of his luxurious idea, which, after all, is not much worse than an answer I heard from an old friend, while crossing this same Rock River Prairie, before the plow had scarred its primitive loveliness. "What is it like?" was the question. "Like!" said he, "Like Eve before she sinned—like a sleeping infant nude—like them both in marble and repose—beautiful, exceedingly, but THERE

IS NO SOUL IN IT. As God breathed the breath of life into the image he had made, and man became a living soul, so must man, the gardener, with the creative power that God has given him, animate, if not re-make, this most lovely and lifeless work of creation. He can wake these still waves of solid soil, into speaking intelligence, by orchards and gardens, graceful trees and waving grain, and tasty rural cottage homes. God speed the gardener!"

And so say I; and he is here; and the iron horse will soon scare the last Sandhill Crane from Rock River, and the plow leave no marks of the solitary Badger, that, having given a name to the people of a state, has passed away, like the red Indian, to a further west. But my sheet is ended, though not my theme, and yet I have said enough, perhaps. And so farewell.

Truly your friend,

JOHN A. KENNICOTT.

THE CRYSTAL PALACE.

EVERY periodical in the country has been teeming with all sorts of promises, and with all sorts of accounts, respecting this great industrial exhibition. This paper has stood almost alone, in not saying any thing about it. Do you ask the reason? It has no traveling editor there, and no kind friend among its many kind friends there, to write for its pages. Now, rather than be altogether silent, an *echo* shall be heard, and of a strain that accords with the objects of this work; the crystal house itself, as described by Warren Isham, editor of the Michigan Farmer, shall be presented.—[ED. REVIEW.]

The first object which attracts attention, and the wonder among all this world of wonders, is the great crystal palace itself, which, to be appreciated, must be seen at a little distance:—the different stories recede

back (inwards) as they rise, like steps, which prevents a full view of its magnificence to one standing near it. Let us pass along that stream, called Serpentine river, which flows through the park—and now you see it, in all its sparkling grandeur. The vast extent of ground covered by the structure, the transparency of its walls of glass, its terraced elevations from story to story, its large transept, with its arched and glittering roof, shining above the vast vitreous expanse around it, present themselves to you here, as seen through the intervening trees, in all their splendor and magnificence, reminding you of nothing which you ever saw before. In all this vast metropolis, with all its palaces, (and I have seen and admired the costliest of them all), there is nothing to be compared to it—nothing to equal it.

Nor is it a mere matter of curiosity, as a glittering thing to flit pleasantly upon the vision, that this structure is to be regarded. That were far too low an estimate of its

merits. Ornamental it is, in a high degree; its glittering beauties captivate and carry you away; but it has a higher claim than this, rising as it does from the ornamental to the dignity of the useful. In its construction is originated a new style of architecture, offering, for many purposes, advantages over every other, and surpassed by none in cheapness, strength, and durability.

Every part of the frame-work came from the hands of the molder, ready to take its place in the building, and one piece was put up after another as fast as it arrived. First a post was raised, then another post, and then a girder and connecting piece, extending from the top of one post to the top of the other, was raised to its place. At the opposite side of the square (twenty-four feet), two other posts, and a girder connecting them, were put in their places; and then more girders, extending from the posts last raised to those first raised, completes a section of the frame of one story of the building; and all that remains to be done, is to go on repeating the process, until the whole is finished. There will, of course, be only two posts to each bay, as it is called, to be raised, for the most part, after the first one is erected.

The posts and girders were raised to their places by that very simple contrivance, technically termed "shear-legs," which consists in lashing two poles together at their heads, and placing them at such an angle of inclination to each other, as to form an apex at the top, from which apex ropes were extended on each side, to the ground at a distance, where they were fastened to stakes; and thus the poles were held in their places. From the same apex a series of ropes, passing over pulleys, were suspended; and by this simple and apparently frail contrivance, every piece on the building was raised to its place, story rising above story, *all at once*—the first story progressing a little in advance of the second, and the second a little in advance of the third (wonderful to tell!) until the whole was finished.

It was only seven months in building, but there were over two thousand hands at work upon it for the last three months. There were between four and five hundred painters upon the building at one time. Great praise is bestowed upon the workmen employed

upon it. The panes of glass are four feet one inch by ten inches, and yet one man inserted and glazed one hundred and eight panes in one day—being 367½ feet. That, however, was an extraordinary day's work.

As a whole, it is a noble monument of British ingenuity, British industry, and British resources. That the castings should all have been made so true and exact, that such an enormous quantity could be furnished so readily, that all of them should have been lifted with such dispatch to their places, and that the whole should have been completed by the very day set sixteen months before for its delivery to the commissioners, and that without any material accident having occurred to the workmen employed upon it, is truly marvelous. Nine months had been frittered away in deliberating upon different plans, previous to the adoption of this, which was only thrown in at the ninth hour.

Another wonderful thing is, that it is just large enough to answer the purpose—neither too large nor too small. I should have said that the strength of every piece in the building was tested before it was put up.

A reliable authority gives the following as the exact dimensions of this gigantic building:—

Length,.....	1,848 feet.
Width of nave and aisles,.....	456 "
Width of transept,.....	72 "
Length of ".....	408 "
Hight of ".....	110 "
Hight to spring of arched roof of trans.,	64 "
Hight of nave,.....	64 "
Width of ".....	72 "
Width of side aisles, first series, each,	48 "
" " second ".....	24 "
Hight of side aisles, first series, each, ..	43 "
" " second ".....	23 "
Total area covered, 18 acres, or.....	772,784 sq. feet.
Total area of galleries,.....	217,100 "
Total cubic contents of building, ..	33,000,000 feet

Such is the building in which a grand gathering of the nations of the earth is at this moment witnessed. It is no small part of its marvelous character, that it should have sprung from the inquiring mind of an eminent horticulturist—Mr. Paxton of Chatsworth,—suddenly, and after 233 competitors, all of more or less professional eminence, had entered the field, without producing any thing similar to his design.

Letters from the Editor.

NUMBER THREE.—AKRON.

LEAVING the Cleveland and Pittsburgh railroad at Hudson, you will find yourself seated in a hack or stage, which immediately whirls you away from the station house, and the substantial town of Hudson is brought into view, only to be left at once by those who travel southwardly. It occupies an elevated region, and is remarkable for its churches, college and schools, as well as for its trees; and, moreover, it is in the very heart of Cheesedom, being the focus towards which these products of the dairy flow, and whence they irradiate to all parts of the country. Having no correspondents in the place, I am unfortunately unable to draw any conclusions respecting the horticultural tastes of the inhabitants, but should very naturally infer that a people who are noted for so many excellent properties, could not and should not be deficient in a love of flowers and fruits.

The road to Akron passes directly south for some distance, through a beautiful grazing country, in which the thrift of the Yankee farmer, naturalized in Ohio, is every where manifest. There is some attention paid to gardens and ornamental shrubbery; considerable ground is devoted to orchards, especially of apples. Peaches appear to be an uncertain crop. Some cherries look very thrifty; but there is not much fruit to be seen this year. Some apple trees, however, are quite full—also, some quinces and pears. No blight was observed on the latter. The most gratifying feature was the attention paid to planting trees along the straight and well-kept roads that cross the country almost every where at right angles; in some places, they looked as though they had grown twenty years; in others, they were just planted.

At Stowe Corners, one of the intersections above alluded to, a small nursery attracted my attention; and after turning to the westward, the pretty little sheet of water called Stowe Lake, made a very pleasant addition to the rural landscape. It is one of the many ponds found in the depressions of this region. On its southern shore is a small ridge of fine, sharp sand, with vegetable matter, forming a *dune*, upon which some beautiful forest trees were growing. A boat upon the lake enables one to investigate the character of its pretty aquatics, *Potamogeton*, *Nymphaea*, *Sagittaria*, etc., etc.; while around its margins, in the neighboring fields and hedgerows, a rich harvest awaits the botanical collector, among the *Spireas*, *Carices*, *Cephalanthus*, *Alnus*, *Vaccinias*, *Ferns*, *Solidagos*, and many others.

But the true gardener, looking to the *utile* as well as to the *dulce*, would be delighted with that sand of the dune. What rose or geranium cutting could be so obstinate as to refuse sending out its roots into that soil? Why, it would be a perfect treasure to a greenhouse man in the potting-shed.

Progressing southwardly, the great drift deposit, which has thus far been characterized by clays and sands, with large boulders, begins to grow more gravelly, as though it were composed in great part of the pebbles from the decomposition of the coal rocks that are here found, the coal itself appearing a few miles further south. The rocks soon appear on the way-side, and overhanging the Cuyahoga river, as the road approaches a very thriving village, called Cuyahoga Falls, which is filled with busy factories, mills and stores, and rises beautifully from the stream. In the portion devoted to private residences,

many of which are very pretty and tasteful. Some are constructed of the sandstone, which is quarried in large blocks, and easily dressed. But the ruling fashion of the Western Reserve prevails here to a considerable extent—white and green paints, sometimes varied to red, cover the wooden houses, that are most common; and this, too, in a country abounding in sandstone! One fine large house has been erected of this material on the south bank of the river also, and presents a very handsome appearance.

The natural scenery of this immediate neighborhood, and its vegetation, will interest the gardener. The sandstone, which dips toward the south, is here cut through by the river to the depth of a hundred feet, the stream dashing along in rugged wildness among rocks and trees in the bottom of the gorge, which is overgrown with that beautiful American evergreen, that is destined to bear the palm among all the celebrated imported cousins of the resinous tribe—I mean the hemlock spruce.

These are found clinging to the rocks from the top to the bottom, the old trees rising in majesty, and the young growing in their native luxuriance—mingled every where, and contrasting finely with birches and other deciduous trees. The young ones are of all sizes, and few localities present a better field for gathering small plants for the nursery, so accessible and so close at hand. The remarks of D. Thomas, upon "A Soil for Laurels," presented in a previous number of the Review, were forcibly brought to my remembrance while clambering over the rocks along this gorge, which were covered in some places with a sharp white sand, and black vegetable matter, that resembled peat, and looked as though it would grow laurels, or even the saucy azaleas, that so obstinately refuse our stiff soils. No representatives of these families were discovered, however; but instead,

their frequent companions, the *Epigæa repens* and the *Gaultheria procumbens*, and other Alpine plants. Among the shrubs, the mountain raspberry was conspicuous, with its large purple flowers. This wild spot will soon change under the civilizing hand of man—already, a large mill-race has been excavated half way up the cliff; on the top is the Pennsylvania and Ohio canal, with its constant freight of coal boats, outside of the county stage road, with three telegraphic wires; and excavations are rapidly progressing for a branch railroad, to Akron and Massillon, connecting the two great lines that stretch westward from Pennsylvania into the heart of Ohio.

The country now assumes a still more gravelly aspect. A wide plain of drift, of this character, stretches several miles to the southward, bounded by ranges of sandstone hills, that have withstood the abrading action. This plateau has a peculiar vegetation—the ashes, beeches, walnuts, maples, and tulip trees of the region extending toward Lake Erie, give place to black, red, scarlet, and other oaks, frequently of a scrubby character, especially the little mountaineer or dwarf oak, (*Quercus chinquapin*), which are sometimes loaded with acorns when only a foot high. The hazlenut and whortleberry prevail among the shrubs; and in wet places, the cephalanthus, alder and spireas abound, growing under the genuine pin-oak, (*Quercus palustris*), so rare in most parts of Ohio, and so abundant about Philadelphia, in Pennsylvania. Prominent among the herbaceous plants, is the wild indigo (*Baptisia tinctoria*), which never presented a prettier show of flowers than here. The *Girardia flava*, with its wax-like yellow blossoms, the *Asclepias tuberosa*, in rich orange tints, *Monarda*, *Solidago*, and a host of other plants, stood ready to reward the botanical collector.

The vale of the Little Cuyahoga river

breaks through this high plateau of sands and gravels, and after descending to its pebbly bed of pellucid waters, the road rapidly rises to the scattered town of Akron, which occupies almost as many hills as ancient Rome. The two canals, with their many locks, the mills, manufactories and forwarding houses, give the town quite a busy air, which is almost contradicted by the extent over which it is spread. Nearly every house has a garden and fruit trees. Some of the latter are crowned with promise, but the crop of peaches a little further south is said to be better. Strawberries are said to succeed remarkably well on this sandy soil, and certainly the beds now look unusually well for the season. The foliage is rich and healthy. The kinds most cultivated are Burr's seedling (old staminate) Hovey, Methven scarlet, Willey and Hudson. The inhabitants appear to be full believers in the "strawberry theory," and they are rewarded by fine crops.

One of the best and most interesting gardens I saw was that of Dr. Commins, in the midst of which he has recently erected a beautiful residence of sandstone, elegantly finished within and without. His garden is still new, but he has most industriously collected a great many of the native plants, among which are many beauties, that are highly deserving of careful culture, even where they are as impatient of the restraints of civilization as the wild red man. Shaded nooks and sheltered spots may be easily prepared for them at a little expense, as has been done in this place, where certain situations have been appropriated to the culture of such wildlings as were found in moist and shaded places—among them, the *Cypripediums*, *Vacciniums*, *Heptica triloba*, *Anemones*, *Polemonium*, *Convallaria*, and many others, were joyfully greeted, as was the fine plant of *Ampelopsis quinquefolia*, upon the wall of the mansion.

Among their more civilized neighbors, the *Halesia tetraptera*, and other beautiful flowering shrubs, have been introduced from the gardens; and a very pretty edging of *mignonette*, and another of *candy-tuft*, and *Phlox Drummondii*, with two mounds covered by species of *Sedum*, reminded the observer of the artistic character of the place. Vegetables and young fruit trees also claim the attention of the proprietor, and show his good care; so that he must be set down as one of the leaders in horticultural matters, in this rural town.

One of the most interesting objects about Akron, as it should be at every other town, is the grave yard, or, as we now say, the cemetery, which is situated on a rolling piece of high ground, bounded on one side by one of the curious ravines that characterize this gravel formation. The grounds have been long occupied, but an effort is now making to adopt some of the modern appliances of good taste for its adornment. It is to be hoped that the citizens will preserve the young growth of timber that is springing up luxuriantly, and at the same time introduce other ornamental trees and shrubs. Let them also keep as many as possible of the beautiful *Lilies*, *Asclepias*, *Monardas*, *Gerardias*, *Lupines*, *Liatris*, and other wild flowering plants, that now abound there to such an extent that thirty species may be gathered in a hasty ramble of a few minutes through this consecrated spot.

But I must not forget the Ferns, which appear to luxuriate in the forests here, more than in any other place I have seen in this State. Here are more species, and more numerous specimens, than are often found consociated. Why will not some one establish a fern garden in the neighborhood? This family will undoubtedly attract attention. *Fergeries* will be admired more and more as these curious and interesting plants

become known; and he who will undertake to furnish a supply for the coming demand, will reap a rich reward.

There are several other fine residences and pretty gardens about this town, among which is that of the celebrated wool-grower, Perkins, who numbers his sheep by thousands. But I was unable to visit him.

I observed at a street corner a successful experiment in moving a large tree. General Barse had planted a *Magnolia acuminata*, thirty feet high, outside the sidewalk, last spring, and it is now full of leaves. In other parts of the town, many young trees, moved last spring, were liberally mulched with fine charcoal, and are doing well.

THE DESTRUCTION OF WOODLICE.

Most Gardeners are much annoyed with woodlice. They breed in heat both winter and summer, and they possess an appetite of the most accommodating kind. It matters not whether it is the blossom of the cucumber or that of the pine-apple that comes in their way, the fruit of a melon or that of the cucumber; and they will eat the nauseous leaves of the *Lisianthus Russellianus* with the same relish as they do mushrooms, carrots, parsnips, beet-roots, scorzonera, and salsify; they like for their salad chicory leaves, which are not a whit too bitter for them. I have lost many an ounce of strawberries through their depredations, and also many an early cucumber that would have brought me 3s. 6d. in the market. The means I have employed for their destruction have been toads, which are effectual, but they are expensive, being 4s. a dozen. Many of them die, and except they are kept in quantity, the woodlice can not be kept down. I have also tried pots with hay in them, carrot, sliced turnips, cabbage leaves, bread, poisoned ditto, poisoned turnips, and boiling water, when it could be used. As to the time for destroying them, we all know that if we kill a wasp in spring, thousands are at once destroyed. It appears, then, that the best time to kill woodlice is towards August, when they have ceased breeding, and are spread all over the grounds; attack them

then before they return to their winter quarters, to which they repair with alacrity when roused. I once formed a mushroom bed parallel with an old dead fence; but, as might have been anticipated, I did not gather a single mushroom; every time the bed was uncovered, the woodlice made over the ridge for the fence with great speed.

My object now, however, is to state that, from some trials I have made, I am convinced that woodlice may be killed by the use of bantam fowls. This plan may be put in operation by any one, even at this time of the year (December). I first had a hundred woodlice caught at a rubbish heap, and gave them to three bantams; they ate them up in something less than two minutes. I had these birds in attendance when turning over a rubbish heap, and not a woodlouse was allowed to escape, nor any insect, the bantams devouring every thing; it will thus be seen that if bantams were encouraged and brought up in gardens, they would effect much good; and I am of opinion that it will soon be found to be as necessary to keep bantams to kill vermin, as it is to keep cats to keep down rats and mice. They will save various crops from injuries to which otherwise they would be exposed. They would scratch a little to be sure, but so do cats, and if the smaller kind of bantams are kept, (those about the size of a partridge,) their

scratching would do little harm. The reason why gardens are generally nurseries for all sorts of insects is because they are guarded by cats, traps, nets, etc., in such a manner that no bird can approach them. If it were not for the wild birds of the fields, the farmers' crops would be eaten up with vermin; and I think that birds have as much right to a little of the fruits of this earth as we have, for helping to keep destructive insects in check. It will be the gardener's own fault if he is much troubled with wood lice in future

The above was written last December. This spring I had a temporary cage placed at the end of a twelve light cucumber pit; a brick was driven out in order to allow the ingress and egress of a large brood of bantams. They ate up every insect in less than a week. Another year, I intend to have a hole in all the pits, and move the young bantams from one pit to the others. I have a rubbish corner where all the rakings, leaves, and general refuse of the garden are put.

This place is inclosed with four feet laths all round, and a brood of bantams was put there. This was at one time the grand breeding place for all sorts of insects; but now it is the most valuable corner which I have. The moment an insect comes to the surface it is eaten up. I have had three full grown bantams at large nearly all the summer, and to see those birds, with their hawk's eyes, walking about through the sheds, houses, mushroom places, up and down the alleys of the pits, etc., picking up every crawling insect, is very satisfactory. One bantam is worth fifty toads. I do not mean to say that in a general kitchen garden, it would do for them to be at large at certain seasons; but even then I should make them quite welcome to a few cabbage or lettuce leaves, for the great benefit that is to be derived from their destroying every sort of insect, except the slug and snail, which a few young ducks in the autumn and spring would soon remove.—*Cuthill.*

ORCHARDS.

DR. WARDER: Mr. Isaac Underhill, in his letter to Dr. Kennicott, Horticultural Review of July, p. 486, among other very sensible observations, says, "I also like the plan of having the limbs of the trees branch within two or three feet of the ground." That is precisely what I have been trying to accomplish, but hitherto my efforts in that respect have proved fruitless. How is this thing to be done? I have an orchard in a high, airy, and consequently exposed situation. My trees are in very fine order, and make a rapid growth. They are the same noticed by Mr. Solon Robinson, in the American Agriculturist, Volume 8, p. 18. From their exposed situation, I was very desirous to shorten the stem, and give the

tree a low head; but they will have *their own* head in spite of me.

My trees, as I said, are in a flourishing condition. Any beholder would call them fat and sleek, and yet I see plainly that some of them are inclined to *lean*. The soil in which they stand is a dark sandy loam, in which the roots will not hold as in a stiff clay. The mischief is done by those gusts from the south-west, which attend our thunder showers in summer. The tree being then in full leaf, catches all the wind that is going, and, our loose earth, moistened by the accompanying rain, holds on to the roots with a weaker grasp than at other times. The power of the wind being increased just in proportion to the length of the stem, I

should regard it as a great point gained, if I could learn how to shorten it. I have consequently used divers persuasives to induce them to hold their heads lower, but they seem bent on having them at their own height, or having none at all. In fact, like most headstrong folks, they are become most incorrigible, and I have no hope of them; but perhaps I may learn something for the benefit of the "rising generation."

Being willing to communicate as well as to inquire, I will say a few words about planting, etc. Notwithstanding the loose character of the soil, I had the holes dug four to five feet wide, and two feet deep; the first spit thrown out by itself and mixed with a bushel of well rotted manure to each tree. The hole being filled with common earth so as to raise the tree to a proper height, and highest in the middle, so that the roots could be disposed in an easy, natural position, I set the tree and filled in with the compost, pressing it carefully between and around the roots with the hand. The owner must use his own hand in this operation. Any other will not do half as well.

Before setting, every bruised root should be carefully pared, and, in a loose, friable soil the crown should be as low as the surrounding surface. Most orchardists advise to have it a little higher, so that when the tree settles, it will bring the crown about to the surface, as it stood in the nursery. That is right in a stiff soil. In a sandy loam it must

be set a little lower, for it is a great point to secure the tree in an upright position, which will be essentially aided by setting it lower in the earth.

Having some years ago planted an orchard in the old way, that is, by digging a little hole and sticking the lower end of the tree in it, I was enabled to realize the benefits of the method here suggested. The latter mode of treatment is worth about three years out of five, over the former, in respect to growth; and about one hundred per cent. in the prospect of living through the first summer; and in other respects more than you can imagine.

Touching caterpillars, a little care is all that is required. Just kill them all and they will never trouble you. Don't leave any to go to seed. I have not had a caterpillar in my orchard this year, because I don't raise any, and have no neighbors who do. If any come in the spring, pull their nests off with the hand, as soon as they are large enough to be seen,—they won't bite to hurt.

Too much can not be said in favor of mulching. A grove contiguous, furnishes me with leaves in abundance, and they do excellent service. Frequent spading around the tree is also beneficial, and both better than either alone. Planting or gardening of any kind is a game in which spades are always trumps, and he who holds a full hand is sure to win. Yours.

S. B. GOOKINS.

Terre Haute, Aug. 5, 1851.

SCARLET THORN, AND SCARLET HORSE-CHESTNUT.

Mr. RIVERS of the Nurseries, Sawbridge-worth, has written me two letters, from which the following are extracts:

DECEMBER 14, 1850.

"You have got us poor nursery-men into a mess, by calling the Double Pink Thorn

the 'Double Scarlet.' There is no such thorn. There are, as you well know, only two double thorns; the Double White, which fades to a pale pink, and the Double Pink, most properly named, for it is *always pink*, and never red or scarlet. Pray, make this right, for already people order 'Double

Scarlet Thorns,' and will not believe there is no such thing, because you say there is. No honest man can label a thorn 'Double Scarlet,' for it would be a lying label.

"Again, the Scarlet Horse-Chestnut is *Æsculus rubicunda* of London, and all of us; my specimen tree is thirty feet high. It can not therefore be called dwarf. I have never heard it called 'Scarlet Pavia.' This name is applied to *Pavia rubia*, and its variety *P. humilis*, both dwarf, and with dark crimson flowers. I have never seen either of them called *Pavia rubicunda*, this latter name always being attached to *Æsculus*, your Scarlet Horse-Chestnut with large rugose leaves. The Pavias have all very smooth foliage. By the way, *Pavia discolor* makes a nice free, flowering standard.

I have long wished to get standards of *P. macrostachya*, a great favorite of mine, but the buds have always failed. I think I have tried it at times for these twenty years, and have never succeeded in making it a standard by inarching."

DECEMBER, 24, 1850.

"The four popular varieties of the Hawthorn ought to be named as follows:

"The Pink Thorn or Hawthorn, formerly known as the Scarlet Thorn.

"The Crimson Thorn.

"The Double White Thorn.

"The Double Pink Thorn.

"There is not the least approach to *Scarlet* in any of them. Neither ought the *Æsculus rubicunda* be called the 'Scarlet Horse-Chestnut,' but the Rosy Horse-Chestnut. You see the old way was (but we must change such matters) to name a variety, not according to its actual form or color, but according to what was *wished* for, or *desired*; thus, the first deviation from white Hawthorn was called 'Scarlet.' Too bad, was it not?"

At first, I thought Mr. R. put me down as a fast writer, who wrote at random, and to meet that charge I prepared the following defense: In the first letter, Mr. R. wrote *Scarlet Horse-Chestnut* as we all do, being such a common word in the nurseries. In the second letter, he is not far from my translation of *rubicunda*. What he says about his beautiful specimen of *Æsculus rubicunda* is a feather in my cap, for it thus appears that under first rate management this beautiful tree attains to a greater size than I, or any of the authorities stated, was aware of. Still

I should not feel myself justified in calling it otherwise than I have. Last summer I saw six plants of Queen Victoria geranium about five feet high, and fine bushy plants; but few would take me for a faithful authority, if I called the variety more than a dwarf, and so with the chestnut. I did not know that *Pavia macrostachya* was so obstinate as to refuse uniting by grafts or buds, and notwithstanding Mr. Rivers' great authority, I am not satisfied about letting it off from further trials. Will it take on any of the smaller Pavias? Unless it refuses to do that, we may be sure of it yet, by double working, or, perhaps by inarching in August, after the flowers are over; there are many plants that will neither root nor take grafting while preparing to flower, or when in a flowering state.

I know all the double thorns, and the red thorns well, and also the chestnuts, but would rather not trust to my own eyes when I am called in question. In the *Gardener's Chronicle*, vol. 2, p. 5, Dr. Lindley writes of the true Double Scarlet Thorn, and of the single form of it—"The most brilliant of the thorns, with bright crimson blossoms, and the double variety has also flowers nearly as intense."

Dr. Lindley would not have thus described a pink thorn, and therefore the probability is that Mr. Rivers does not know the sort. Respecting the *Scarlet Horse-Chestnut*, I learned that name also, and did not make it, but there is no such in existence. No one has ever yet seen a Scarlet Horse-Chestnut. Here, too, I can not trust to my own eyes. The first account of the Scarlet Horse-Chestnut is in an old French periodical of more than forty years standing, called *Herbier del Amateurs*, or, as one might say, a French Cottage Gardener. There it is first called *rubicunda*, that is, *glowing red*, or, as we say in the country, a jolly red face. The next account we have of it, is in a work published at Berlin in 1822, called *Dendrologische Flora*, with a plate No. 22. In 1825 it was figured in London, in a work called *Dendrologia Britannica*, plate 121. Here it got paler, and was called *Carnea*. Dr. Lindley also named it *Carnea*, in the *Botanical Register*, plate 1056. But the elder Decandolle adopted *rubicunda*, in his large *Prodromus*, vol. 1, p. 957, just five-and-twenty years ago. Don, in his *Miller's Dictionary*, did the same vol. 1, p. 652. London followed the true name in his *Arboretums*. A Polish

botanist, *Schubert*, called it *rubicundum*; and a German botanist, who seemingly got into Paris through the very center of the multiplication table itself, and who, out of old iron, manufactured new names for old plants by the score, for the pages of *Annales des Sciences Naturelles*, calls it *Watsoniana*, very likely, after the author of *Dendrologia Britannica*—derivations being fashionable just now—and I recollect the day when, if Dr. Lindley had found two trusty friends like Mr.

Rivers and myself, he would have gone over to Bonlogne to "meet" this German botanist with a piece of old iron. But having missed that, let Mr. Rivers consult the above authorities, and if any of them called his tree a scarlet sort, or if any of them did not range it below the medium size, I shall consent to be called a fast writer, not knowing what I am about.

D. BEATON.

Cottage Gardener, Jan. 9, 1851.

A CHAPTER UPON PEARS.

BY JAS. H. WATTS.

Rochester, Aug. 4, 1851.

DR. WARDER: I inclose you an article upon the Pears grown in our region. I shall leave you to decide whether best to publish it. If it will interest your readers, I shall have accomplished what I intended.

I thank you for a recent letter, and wish you and your deserving work all the success imaginable. * * * * *

Very truly,

JAMES H. WATTS.

I may send you an account of our "Mount Hope" Cemetery, on some future occasion.

THE Cemetery article is received and laid over for next month, being too late for the current number. We shall be glad to know what our neighbors are doing in this department, having a large enterprise of our own near the city.—En.

THE Pear tree has in general a most luxuriant growth in this immediate region, and has of late been much subject to blight. Many choice and vigorous trees have perished, and cultivators have, in all their experiments, given it as their opinion, that thorough mulching with straw is the most effectual preventive known. As our native varieties have been the longest grown here, I will fur-

nish your readers with a list of those cultivated successfully. As yet the supply is not abundant, but is becoming more so every season. The fruit bears a high price and finds quick sale.

Osband's Summer, or *Summer Virgalieu*—ripens early in August—is of a delicate and rich flavor, and nearly equal to the Fall or true Virgalieu. Is juicy; and much sought after. It had its origin in Wayne county, N. Y. All who cultivate gardens should have it.

Bartlett—ripens in September—is an universal favorite, and has been found fully equal here to those grown in the vicinity of Boston. They are, as yet, quite scarce, and command high prices. Tree of handsome shape, and the fruit juicy and of a musk flavor. It should be one of all lists.

Seckel—small sized but delicious, and no less a favorite because small. Tree bears well, fruit very scarce in the market.

Steven's Genesee—originated in Ontario or Monroe County, N. Y. Grows to a good size, roundish in shape, and when ripe is of a beautiful yellow color—somewhat spotted with brown specks. It needs to be eaten as soon as ripe, for it commences to decay at the core, and is deceptive in its appearance on that account. Tree vigorous,

but frequently blights. Ripe in September and October.

Onondaga, or *Swan's Orange*—Tree said to have originated near Syracuse, N. Y.,—fruit grows to a large size, of a rich golden color when ripe, and very juicy. It is not as sweet as many pears, but of a good flavor. Tree vigorous,—the fruit is ripe in October and November.

Virgalieu, in Philadelphia known as *Butter*, and as *St. Michael* in Boston.—This excellent fruit grows to good size, is high flavored and juicy, and combines every quality necessary. It has all the world for its admirers, and has been known to bring eighteen to twenty dollars per barrel in New York city,—picked early it is a long time ripening during October and November.

Oswego Beurré—Had its origin at Oswego, N. Y.,—it is of rather small size—very juicy, with brownish color, and is one of the choicest. Tree said to be hardy,—ripe in October, and keeps well.

Thus I have given you a list of native

fruits, some of which you will see had their origin in the State of New York.

The world has hardly produced better. Beginning with the "Virgalieu" for the best, and ending with the "Steven's Genessee," we tell your readers few can be better. We do not neglect the foreign fruits; our nurserymen by their catalogues show they have all the approved kinds for sale, and I wish in this connection, to refer to the fact that our townsmen, Ellwanger & Barry, boast with no little pride of the substantial premium they received for their exhibition of *Pears*, at your recent Horticultural fair. I should do injustice to my own feelings not to mention Ellwanger & Barry, Samuel Moulson, J. Ryan & Co., A. Frost & Co., John Donnelan, Bissell & Hooker, King & Dawe, John J. Thomas, and W. R. Smith, who are importers of all foreign varieties of trees, plants, etc., and who are extensive growers of the native trees of our own country.

Truly, J. H. WATTS.

Rochester, New York, Aug. 1851.

ANEMONES.

We once knew a lady who was infected with the most harmless, or rather the most interesting, of manias, a fondness for the genus ANEMONE, superior to that which she entertained for any other flower, and she succeeded by some means in having some one or other of the species in bloom nearly throughout the year. In her shrubberies she had in profusion what she called, "her pretty pages." The wood Anemone, (*Anemone nemorosa*), with its single and double ivory white flowers, mingled with those of the Yellow Wood-Anemone, (*A. Ranunculoides*), blooming together early in April, and continuing for months "thickly strewn in their woodland bowers." In May and June, she had the Palmata-leaved Anemone, (*A. Palmata*), with its golden stars, together with the many-tinted cups of the Garland Anemone, (*A. coronaria*) and the Garden An-

emone, (*A. hortensis*). Nor were the common Pasque flower (*A. pulsatilla*), with all its varieties of red and blue flower cups, nor the Alpine Anemone, (*A. alpina*), with its still more varied blossoms, sparingly found in her borders. If we remember faithfully, the last anemone blooming in her garden was the *A. Nuttalliana*, sometimes with purple, sometimes cream-colored flowers, and these lasted through July and August. How she managed to have anemones in autumn and winter by the aid of her green-house we know not; for in those days we thought more of the flowers than of their cultivation; and she is now gone to rest who would have delighted to impart her knowledge to the readers of *The Cottage Gardener*. She was not only a cultivator but an historian of this flower; and many relative pages, original and selected, were in her port-folio. of which but few now

remain; nor have we the means of ascertaining from what authorities she gathered her lore.

"I have loved the Anemone from childhood; for my earliest recollection of a flower is that white one of our woods; and I call it still "my pretty page," because my father, as we strolled together, used to point them out as 'Spring's pretty pages.' As I grew up, he told me of the fabled creation of our Garden anemone; and the translation from Ovid, which I then read, re-read and mourned the while over the fate of the beautiful Adonis, has never been forgotten." Venus, it will be remembered, is said to have warned Adonis from the chase in which he died, and that from his blood she formed the Anemone.

"Then on the blood sweet nectar she bestows,
The scented blood in little bubbles rose;
Little as rain drops, which fluttering fly,
Borne by the winds along the lowering sky.
Short time unseen till where the blood was shed,
A flower began to rear its purple head:
Still here the fate of lovely forms we see,
So sudden fades the sweet Anemone.
The feeble stems, to stormy blasts a prey,
Their sickly beauties droop and pine away.
The winds forbid the flowers to flourish long,
Which owe to winds their name in Grecian song."

As the Greeks derived its name from anemos, the wind, so in England is the Wind-flower one of its popular names; and by both nations has it been held in esteem as a powerful medicine. Pliny says, that in his time, the people were directed to gather annually the first anemone they saw, uttering at the same time the incantation, "I gather it as a remedy against tertian and quartan fevers." The Romans also wreathed it in their hair, "and there is scarce any flower better calculated to be artificially instituted for the purpose of ornamenting the temple of Venus; for as its flowers are of such various colors, the Venuses of every clime, from the blackest of Africa to the fairest of Britain may suit wreaths of anemone to their complexion."

In *Turner's Herbal*, published 1568, it is called the anemone; but he adds, "it may be called in English Rose Parsley, because there groweth a flower, like a single rose in the middle of this herb, which is very like parsley in the leaves that are about the root." Gerard, writing a few years later, (1597) says, "the stock or kindred of the anemones, or wind-flowers, are without num-

ber, or, at least, not known to any one that hath written of plants. For, Dodolus hath set forth five sorts; Lobel, eight; Tabernmontanus, ten; and myself, have, in my garden twelve different sorts; and yet I do hear of divers more differing very notably from any of these. Every new year bringeth with it new and strange kinds. Every country hath its peculiar plants of this sort, which are sent unto us from far countries, in hope to receive from us such as our country yieldeth."

The taste for this flower continued increasing, and when Parkinson wrote in 1627, he specified sixty-seven anemones, adding, that there were innumerable others, to distinguish which, "would gravel the best experience this day in Europe." Yet the art of raising varieties of them from seed was not familiarly known in England, but it was practiced extensively in the Low Countries, (Holland,) "some of their varieties bearing such a high price no Englishman would buy them."

We may lament the loss, that our friend died without bequeathing to us her modes of cultivating this flower, because we have now before us *Hints on the Culture of the Anemone, double and single*, by their most successful cultivator, Mr. Cary Tyso, Florist, Wallingford, Berks.

Like our friend, we prefer very much the single to the double anemone, and we shall quote from Mr. Tyso his mode of propagating it, at the same time recommending our readers to send to Mr. Tyso four penny postage stamps, in exchange for which he will send them the entire pamphlet, post free.

Many beautiful colors of this species exist, both self and variegated; and though they are not usually propagated separately, under name, like the double sorts, there are certainly many of them deserving this distinction. It often happens, that persons raise two or three first-rate varieties from seed, worthy of perpetuation; but for want of separate culture and distribution, they live and die with their raisers; and to this circumstance may be attributed the slow progress made towards the perfection of this flower.

When single varieties are left in the ground, or planted early (in August, for instance,) in congenial soil, they attain great strength, and flower throughout the winter,

making a great display early in spring. On this account they are worthy of more patronage than has hitherto been bestowed upon them. They produce seed freely, and in this way may be easily multiplied, as well as by division. The fitness of the seed for gathering may be known by its parting from the axis of the flower-stalk, to which it is but slightly attached. When this is observed it must be secured without delay, or the wind will disperse and waste it. Select flowers of the best quality for seed-bearers, such as have broad smooth cupped petals; if selfs, of dense and uniform color; if striped, or mottled, then the colors should be rich and defined. Remove or destroy all with inferior narrow and flimsy petals, to prevent the stock being deteriorated by impregnation from them.

As soon as the seed is gathered, prepare a bed of nice mellow soil, of which vegetable matter and the road grit are large constituents, and rake it level. The seed being wooly and adhesive, put it into a bowl with sharp sand, and rub it till the seed and sand are evenly mingled. Then sow rather thinly, and cover lightly with similar compost. Little more will be required than the extermination of weeds and worms—a supply of water in periods of drought, and a slight top

dressing of rich soil among the young seedling plants which will appear in less than a month. Thus encouraged, the seedling plants will grow vigorously till November. Many will flower in the succeeding April, when the best should be marked, the worst rooted out, and space thus given for the growth of those that have not flowered.

When the tubers are at rest, the largest (which will be indicated by the strength of the foliage) should be lifted, and the bed again top dressed with rich soil to encourage the small roots, which should remain undisturbed in the bed another year. The roots taken up, may be dried and stored as directed for the double anemones, but should be re-planted rather earlier in the autumn than is recommended for them.

A second sowing of seed should be made in February, on the plan described above. A few of those will flower in autumn, and many in the following spring.

Single anemone roots may remain in the ground for two seasons, if this be preferred; strong plants will remain green nearly all the year round, and during most of the months will furnish ornaments to the table bouquet as a reward to the cultivator—*Cottage Gardener*, 1851.

LETTER FROM N. LONGWORTH.

Newark, New Jersey, July 29, 1851.

DR. WARDER: I am in the land of Buckwheat, if not of Strawberries, and I regret to find that from the appearance of the Peaches, this season, it will soon lose its high character for the production of this fruit. The yellows prevail to such an extent that I have not yet seen a fine peach—and they are ripening a month too soon. I was surprised at some remarks of Mr. Elliott, in your last number, on the Strawberry. He has discovered that Burr's New Pine, pistillate, will bear large crops of perfect fruit, in grounds where no other vines existed. I have cultivated this plant but two seasons, and have not given it special examination, but if the

gentleman will send you some of the plants for trial, and you sustain his opinion, call on me for \$100, to present the gentleman a silver pitcher. As the New Pine is a favorite of yours, you will readily distinguish it by the stem and leaf. The gentleman has had another sort on his grounds. It is a common occurrence. Nor can I agree with Mr. Elliott, that it matters not whether the soil be clayey, sandy, gravelly or loamy; I hold that a stiff, rich soil is indispensable to the production of large crops of large berries from most of our varieties of this fruit. What is your experience? [The same, in my observations hereabouts.—Ed.] I have found Burr's Old Seedling, which he lauds highly,

a bad bearer, even for a hermaphrodite, and not to be compared with the Iowa, which he discards. Yet the latter is so prone to kicking all his associates out of bed, that I have discarded him. If our new Hermaphrodite Seedling sustains its present character, it will supply the place of all hermaphrodites. I perfectly agree with him in many of his views. It is strange, indeed, that Eastern Horticulturists laud the Large Early Scarlet; they have a strange notion of what constitutes a large fruit; His Methven Scarlet I have discarded. Even the knowledge of the sexual character of the Strawberry must travel slowly, when such men as Mr. Downing and Mr. Elliott, break in on our backwoods doctrines. Mr. Downing, some years since, had the Hovey's Pistillate changed to Staminate. He has not yet acknowledged his error. I myself belong to the stubborn school, and am slow to back out, when I have once set down my foot; but I sometimes find it prudent to do so, with the best face I can, speedily: I would recommend the same course to friend Downing. He owes it to the public, for, next to his Preacher, he stands beyond contradiction.

We are soon destined, not only to supply the United States with wine, but to export it largely. Most persons say, that they would not be willing to run over their earthly course. I would willingly do it again, even if I had but one change. The forethought, earlier in life, to commence the raising of seedling Grapes, from our best native varieties, and a mixture between them and the best foreign. I, this season raised a few thousand of the former character, and of one superior variety, have 800 plants of extra vigorous growth, and shall be disappointed if I have not Grapes of black, white and red color, among them, equal in the size of the grape and the bunch, to the Black Hamburg, and its rival in quality. Two or three years

will test the question. I add this to induce others to follow the example.

A report was current in our city, that one of our German wine-growers, who professed to keep his Victoria wine sweet without any addition to the must, had accomplished the object by adding a poisonous drug. As a charge of this kind was calculated to bear on the character of our native wine, the subject was brought before the Wine Committee of our Horticultural Society, some of the members being good chemists, and samples of the wine produced. They have made a report, which does not appear to me to be explicit. If no poisonous drug was added to destroy fermentation, justice to the manufacturer required that it should be stated. If there had been, justice to the public required an explicit declaration. I should have said that pure grape juice could not be kept from fermentation, by a mere charm. But, we must be cautious in these days, when the Rochester knockings are believed in by many of our intelligent citizens. And I wonder not at this. For a learned Professor of Physical Science, of Edinburgh University, has lately published an address in which he indorses clairvoyance in all its ramifications, and says, "the diseases of patients can certainly be discovered by a hair from the head of the patient, or a letter, recently written." In confectioners' shops, in Edinburgh, they have nuts, containing mottoes; some, containing 98 words. He vouches, that many subjects will read motto after motto, without one mistake; and that mottoes contained in 4860 nutshells had been read. A great age this, for humbugs, if nothing else.

Fond as Aristocrats are of *sour cider*, when labelled *Hock—Sweet Wine* for *sweet ladies*, and the *Democracy* will be in great demand, and requires our attention. The price of loaf sugar and rock candy will enable us to make a superior article, as brandy is too often added

in wine countries. There are three methods of keeping wine sweet. One is the mixture of one gallon of brandy to two gallons of must. Mr. Payne, a wine merchant of Madeira, wrote me, that such was the custom with them; that it stopped all fermentation; that in shipping their wines, more or less of this was added, to give richness to the wine. There are but two legitimate methods. The one is drying the watery particles out of the grapes to a certain extent, before pressing. In this case the saccharine principles being greater than the leaven, the wine is sweet after fermentation. The high price of sugar, and low price of wine in Europe, leads to this. With us the object is more easily accomplished, and as well, by adding the best of loaf sugar or rock candy to the must, as it

comes from the press. The quantity necessary can only be learned by ascertaining the quantity of sugar and leaven in the must. With the addition, the fermentation is rapid, but as soon as the leaven is exhausted, fermentation ceases, and the wine will continue sweet for any number of years. Our Wine Committee, I should judge from their report, are dry wine drinkers, and if partial to sweet ladies, have at least no partiality for Ladies' sweet wine.

The Missouri Grape, which is of fine quality, both for the table and for wine, grows with five times the strength and vigor here that it does in the west, and should be extensively cultivated. Its growth almost equals the Herbemont, at Cincinnati.

N. LONGWORTH.

MR. BARNUM ON WINE.

MR. EDITOR: I send you a rich treat which I find in one of the daily papers. If as some suspect, Mr. Barnum can humbug, he is not so green, as to be so easily humbugged, as it appears two of our great men were. But President Fillmore was cautious. He gave no opinion of the wine "kept sweet by a charm," and said "he was no judge of wine, but others who tasted it, spoke highly of it." This wine "kept sweet by a charm" was analyzed by Dr. Rehfuß, at the request of the wine committee of the Horticultural Society, and was found to contain drugs that destroyed the leaven.

A WINE DRESSER.

MR. BARNUM does not spare us grape-raisers, in his laudable zeal in the cause of Temperance—that is, when we turn the fruit into wine. What say you, Dr. Warder, of the "Horticultural Review?" have you any defense to make of our vineyard men?

DELHI TOWNSHIP, 17th April, 1851,
P. T. BARNUM, Esq., Cincinnati.

Dear Sir:—Through Mr. F. Eckstein, Jr., corner of Main and 4th streets, I take pleasure to send you one bottle of sweet Catawba Wine from my vineyards, with the request to try it, and give your judgment within a few days, when I shall come to the city again and shall have the pleasure to see you.

This Wine is something entirely new, made to keep sweet by the mere arrest of fermentation—in this moment the wine is running from the press without the addition of sugar, alcohol or any other substance, it being, therefore, the pure juice of the grape, an article exactly corresponding with the principles pronounced in your lecture. President Fillmore and Horace Greeley have written to me very complimentary letters, which are published.

Mr. F. Eckstein, Jr., who has a supply of my wine on hand, has my authority to present you more of it on my account if you choose. I have also deposited with him two bottles to be presented to Jenny Lind, if you have no objection. Wishing you to call on

Mr. Eckstein and give him your order in that respect, I remain very respectfully,
 CHARLES A. SCHUMANN.

BURNET HOUSE, April 18th, 1851.
 CHARLES A. SCHUMANN, Esq.

Dear Sir:—Yours of the 17th inst., accompanying a bottle of Wine is received. The wine I leave in the hands of Mr. Coleman of the Burnet House, subject to your order.

I can not well conceive how the fermentation of grape juice can be arrested, "without the addition of sugar, alcohol, or *any other substance*," and even if that apparent *miracle* could be performed, I do not believe in tampering with so called "temperance drinks" as substitutes for intoxicating liquors—when God has so bountifully provided for us, that best and most necessary of all drinks, *pure water*.

Intemperance is too serious an evil, its cause is too broad and too deep, to allow its honest opposers wittingly to give it "aid and comfort" through any device. Your wine may be all you say, (which I confess I seriously doubt,) and even then I much prefer the water. Water is the best thing to quench

the thirst—it is the best to aid digestion—it forms a large portion of the human body—it is necessary to our life and well-being—and although I trust I am not a bigot, I, as a matter of duty, as well as choice, eschew with all my heart, all *substitutes* for that glorious element which a kind Heavenly Father has provided so bountifully for every living thing, and *without which the entire animal and vegetable creation must perish*.

Obedient Servant, P. T. BARNUM.

THE above communication and the article to which it refers were mislaid, or they should have been long ago presented as a specimen of the way in which the great wine interest is injured by those who would wish to pander to a vitiated taste—however, here it is—better late than never.

A good chemist who has analyzed this wonderful wine has promised to furnish the result of his investigations, from which the public shall see what is the delectable mixture that has been offered to them for *pure Catawba wine*.—ED.

SEEDLING VS. BUDDED PEACHES.

DR. WARDER: I perceive pomologists entertain conflicting opinions in regard to the advantages or disadvantages of budding peach trees. Some contending that seedlings are vastly preferable to budded trees, and averring that they would not plant the latter if furnished gratis. Others would no more willingly plant an untried seedling with a view to profit, than keep a flock of our common native sheep with a view of producing the finest quality of merino wool.

I do not expect, nor do I wish to change the views of gentlemen in regard to this matter. I will, however, state a few facts that have passed under my notice, and to which I have paid particular attention during some thirty-three years past.

Shortly after coming upon this farm I pro-

cured buds of a variety of Blood cling which had just been brought from eastern Virginia by Col. Nichols, who then owned a large plantation some ten miles above this place, where the peach was in full bearing, and went by the name of Indian peach, or Blue Cling, this peach has very large flowers, which render it more hardy and productive than ordinary sorts, frequently producing fair crops when the small flowered varieties are nearly all killed by frost.

This peach frequently re-produces its kind from the seed. I have had both budded, and seedling trees of this sort in bearing on this place for more than thirty years past, without ever being able to detect the slightest difference in size, color, flavor, or productiveness, except chance ones of the seedlings will

sport, occasionally producing a peach quite dissimilar to the parent; among them I have several varieties of blood free stones, all of which produce large flowers and fruit, which in juiciness and flavor are similar to the parent. This reminds me of a query propounded by N. Longworth, a goodly number of years ago, (I think) in the *Western Farmer and Gardener*. If I mistake not the question was: "Will seeds of budded peach trees reproduce the same?" to which I answer affirmatively, so far as the aforesaid sort is concerned. So will the Italian free when grafted or budded, generally reproduce its kind, but not invariably.

This sort I procured from Gen. A. T. F. Fuller, some thirty-three years ago. This is one of our largest and best peaches, said to be the product of a Cling peach brought from Italy, and much resembling the one above mentioned. There is a striking similarity in the wood, foliage and fruit between the two sorts. Yet the color of the flesh, and flavor of the fruit, are as dissimilar as can well be imagined.

I have also had bearing trees both budded and seedling of this sort more than thirty years, which have produced thousands of bushels of peaches, but never could perceive the slightest difference in productiveness betwixt those budded and the seedlings.

I also have a fine large Cling stone, raised by myself from seed of the Pine apple Cling, some eighteen years since, and budded trees from the same in bearing more than a dozen years. No perceptible difference in their productiveness has been noticed.

I have several other sorts, both budded and seedling trees, which have been in bearing a goodly number of years, without showing any difference in productiveness.

I trust that I shall not be understood by the foregoing, to claim that budded peaches are generally as productive as seedlings. I

know that they are not. My experience shows, however, most conclusively, that it is in the variety, and not the budding or grafting, that we should look for the cause of the difference.

Reasons why budded peaches are tenderer than seedlings.

1st. About nine out of ten of our finest budded sorts are foreigners, many of which are not well adapted to our soil and climate, whereas our seedlings are mostly natives.

2nd. Our finer sorts, generally, say nine-tenths of them have small flowers. About the same proportion of the seedlings have large flowers, which protect them very much against late frosts.

3rd. The wood of almost every first rate sort of peaches, as well as apples, pears, plums, cherries and grapes, is more plethoric and consequently more tender than ordinary seedlings. This is not caused by budding, but a common or natural defect in a great majority of our very finest fruits. The same rule will hold good when applied to animals, vegetables, flowers, or grasses and grains.

4th. A large majority of our finest sorts of peaches, whether seedling or grafted, have large *fruit buds*, much more prominent than ordinary seedlings, which render them more liable to be killed by severe cold weather during the winter than the inferior sorts.

5th. Budded or grafted trees are generally better cared for than ordinary seedlings, which has a tendency to produce a forced growth, and consequently renders the wood more spongy and less hardy.

6th. The budded or grafted tree forms fruit buds when much younger than seedlings. All know that the fruit on very young trees is much more easily killed than on old ones.

Well, say you, "If there are six good reasons why budded peaches are more tender than seedlings, I go in for seedlings." Very well. So long as you confine yourself strictly

to ordinary seedlings you will be pretty safe, but if, perchance, you are so unfortunate as to let a "first rate sort" intrude itself upon you, more or less of the above objections will exist. You can dig it up and fill its place with

one more hardy. If it be not very material whether a peach is first rate or not, so it is productive and hardy.

Respectfully yours, H. N. GILBERT,
Evergreens, Quaker Bottom, Lawrence co., O.

LETTERS FROM THE SOUTH.

DEAR SIR: I feel indebted to your polite attention for No. 1 to 6 of the "WESTERN HORTICULTURAL REVIEW," and can frankly assure you I feel that I owe much to its pages on the score of sound information, regarding a subject on which I confess myself an enthusiast, viz: the Grape. * * * *

Being engaged in the cultivation of the Grape, I shall be truly indebted to your kindness to give me the name of a cultivator or cultivators, from whom I can get, the ensuing fall, a supply of two year old Catawba, Herbemont, Madeira, and Missouri vines. Also, the best individual to apply to for the apple, pear, plum, cherry, etc. I will just add, that from *experience*, I assure you we have an unsurpassed "climate," and "soil," and "elevations," for fruits, especially the Grape—and happily find ourselves, so far, entirely free from one of the consequences of the locality of your section of the Union, a too humid atmosphere both in fall, winter and spring.

Close observation for years, correctly made, proves conclusively the singular dryness, and elasticity of our atmosphere, although happy as regards rains and dews. Vegetable health, and freedom from vegetable disease, is a characteristic of our fruit trees—singularly of the Grape—the last presented in our forests in every variety of wild Grape—a sample of the production of which, I shall have the pleasure of sending you at an early day—the present season exhibiting an extraordinary production of the Grape. I will also add, that the season when the critical moment

arrives for the maturity of this fruit, is almost generally superior, agreeably dry—and equally so at the season for fermentation, that process on which so much depends as regards the quality of wine. The impression held by some of your intelligent men respecting the excessive heat of our climate is unfounded. Our nights, nay, evenings and mornings—our unfailing sea-breeze playing over the country, north considerably of this degree of latitude, tempers a southern sun in its effects on the atmosphere. The close, sultry, and so oppressive night air, when you have to jump out of bed in the middle states, and even northern, and fly to the window of your chamber for relief, is unknown with us. And like ourselves after a warm day, the morning shows that both the animal and vegetable world has been restored from the oppression of the previous day's sun.

I beg you to be assured of my sincere thanks for your kind attention to procuring me the works I have received. I feel a strong interest in the cultivation of fruit, and consequently read with much gratification the results of the experience of able cultivators.

I confess to you, sir, that I feel a little surprised that the matter of planting the vine in the vineyard, has not brought out more of experience and theory. You are no doubt aware that among intelligent Horticulturists, both in the United States and in Europe, the depth at which fruit trees of all kinds ought to be planted, has given rise to much discussion, and even experiment, and in the case of

all fruits except the vine, has been fully settled. I can recollect, some years ago, the subject of the depth at which vines ought to be put in the vineyard, engrossed much attention, and much was written on the subject, and the settlement of this point was viewed of much importance as regarded the longevity of the vine. I should suppose that the experience and talents of your vicinity could settle this point decisively. I can not but notice that your writers on the cultivation of the Grape, appear to write for the vicinity of Cincinnati, where almost all are practically informed, more or less on the subject.

I have long been satisfied that the cultivation of the Grape successfully, requires much care, and no small share of practical knowledge, and as much as possible of Mr. Longworth's favorite ingredient—common sense. Still, experience of others is the aid and guide to success.

I wish sincerely, sir, that some of your judicious cultivators would give the details of cultivating a single vine in the vineyard, for the first, second, third and fourth year, embracing pruning, etc.

As opportunity offers, I will give you some interesting facts, respecting the Grape and wine, that appears not to be known in your region. Our forests indicate a perfectly natural Grape climate and soil, and every trial with every Grape we get, if put into a proper soil, exposure, etc., seems fully to settle the fact.

Your late frosts we know nothing of experimentally, and were astonished the last spring, at hearing accounts from the west of disasters as regards fruit, from that cause. We have a dry atmosphere—the country off our rivers sufficiently elevated—little wet soil. The sea-breeze gives us its genial tempering of the atmosphere, especially in the spring, summer and fall.

I received yesterday the Review for August with much pleasure. I noticed your polite remark, and will respond to it shortly.

* * * * *

After a period of drought, such as no man in this section of country recollects to have witnessed, we have for the last two weeks had the happiest state of weather for vegetation, and the earth amply shows it. Two crops, viz: the pea and potato, begin to do well; they are of extraordinary value to our planters especially, and more so in a failure of a crop of corn, and we have time, if favorable weather continues, to succeed in this truly important crop to us, at the present.

You have no adequate practical idea of the value to us of the potato crop. Our climate and soil admirably suiting it and the pea, and both with us in favorable seasons are highly productive. And it is not a little remarkable, that an unpropitious season for the corn crop, is almost invariably followed by a favorable one for the others—both excellent articles for food, as also in the ample deposit they leave, they are superior meliorators of the soil.

About the middle of July, our pine lands show an excellent variety of the potato, at maturity almost, and although not our finest table root, yet when it comes it is found very acceptable to all palates, and to animals that then require feeding, a real luxury. About this time our crib-doors open with a distressing shrieking sound, and more distressing appearance inside; consequently this root, the great English agriculturist's "little loaf ready for baking" is a most agreeable relief, especially to our colored population, who "rejoice in them."

Of the pea we have a variety, but two of them we highly esteem. One as food for laboring persons, who are extremely fond of them when properly prepared, and the other equally valuable for stock, being free from the

common objections to feeding with the pea—both are excellent renovators of soil—the first perhaps superior to any known variety of that plant, lately introduced amongst us, if not originating in this state. You are aware, sir, of the highly nutritive qualities of the bean and pea. I have had the pea to which I allude chemically analyzed, and so far it is supposed to be equal to any known variety.

In productiveness it is not equaled by any variety known to me, and I have for years been endeavoring to find the most valuable

for food and soil. It throws up a singularly strong and lively stalk, going off into vines of extraordinary length, with profuse and large foliage. The pod and pea for size, I believe are unequalled. When dry, the pea appears to lose the usual pea taste, and more nearly resembles the "big white northern hominy bean." It appears to contain much oil, and at the same time, when prepared for the table, it is quite mealy—its color is bright red.

With much regard, and very respectfully,
St. Stephens, Al. J. M.

CHINESE AZALEAS AND AZALEA GARDENS.

THESE gardens in the neighborhood of Shanghai, are not less interesting than those in which the Tree Pæonia or Moutan is cultivated, and which were described in my last letter. About five miles north of the city there are two nurseries, each of which contains an extensive and valuable collection. They are generally known as the Pou-shan gardens, and are often visited by the foreign residents at Shanghai. A few days after my visit to the Moutan district, I set out to see the Azaleas, which I knew were then in full bloom. My road led through a country, which is perfectly level, and in a high state of cultivation. It was spring time, and every thing teemed with vegetable life. Deciduous trees were now covered with fresh green leaves and yet uninjured by the attacks of the insect tribe. Wheat and barley were in ear, and in some places tinged already with a yellow ripening hue, and the air was scented with the field bean, which was in full bloom. Clumps of trees were dotted over the country, generally divided pretty distinctly into two kinds—deciduous and evergreen. The deciduous clumps marked the spots where the villages and farm houses were situated; the evergreens consisting chiefly of Cypress and Juniper trees, were growing about the tombs of the dead.

Little more than an hour's walk brought me to the garden I had come to visit. There were no external marks, such as name or signboard, to direct the stranger to the gar-

den; indeed a person unacquainted with the customs of the Chinese would never have dreamed of finding such a beautiful place as this is, in a poor country village. Going up a narrow passage between two houses, I reached the residence of the nurseryman. He received me with great politeness, asked me to sit down in his house, and called to one of his sons to bring me a cup of tea. Having sipped the favorite beverage, I then walked out with him to inspect his garden.

In the front of the house where we had been sitting, three or four flat stages were covered with Japanese plants, of which the old man had a good collection. A small species of Pinus was much prized, and when dwarfed in the manner of the Chinese fetched a very high price; it is generally grafted on a variety of the Stone Pine. The Azalea obtusa, and some varieties of it with semi-double flowers were in full blossom and highly prized by the Chinese. The color of this species is much more brilliant and dazzling in China than I have ever seen it in England.

A beautiful variety, quite new, had small semi-double pink flowers, which it produced in great profusion. This will be a great favorite in England when introduced to our gardens. Its novel color, small leaves, and neat habit will render it most desirable for bouquets and other decorative purposes. I have named it *Azalea amoena*. On the stage with this plant I observed a new species of

Holly, which is likely to be of some value to English gardens. I have named this species *Ilex Reevesiana*,* and thus describe it:—

A dwarf shrub, leaves entire elliptical, acute, slightly wavy; dull green, and covered with small dots, somewhat like *Elæagnus*; flowers on short spikes, terminal; fruit large of a deep red color. A very ornamental bush, which flowers in the winter months, and ripens its fruit during the following autumn, like our common English Holly. It is the *Wang-sang-qui-wha* of the Chinese, and said to have been brought from Wang-san, a celebrated mountain in Hwuy-chaw.

After looking over the plants upon the stage, I passed on to the main portion of the nursery, which is situated behind the house. Here a charming view was presented to the eye. Two large masses of *Azaleas* arranged on each side of a small walk were covered with flowers of the most dazzling brightness and beauty. Nor were they common kinds. Generally they belonged to the same section as *A. indica*, (the varieties of *A. variegata* do not flower so early,) but the species so common in Canton and the south were comparatively rare here. A most beautiful kind having the habit of *A. indica* and half deciduous, had its flowers striped with pale blue or lilac lines, and sometimes blotches of the same color upon a white ground. Another species allied to this had red stripes, and

a third was mottled and striped in its flowers, the colors being still the same. These are all quite new, and they flower early in the season, fully three weeks or a month before that section to which *A. variagata* belongs. A red variety, which flowers late, is particularly worthy of notice. Its habit is different from any known species, its leaves are dark green, shining and evergreen; and its flowers are of a deep clear red and very large. Each flower measures from three to four inches in diameter. It is said to be a Japanese species.

I now passed over a little wooden bridge to a third compartment of the nursery, which contained a collection of the common shrubs of the country. Along the banks of a ditch through which the tide ebbs and flows, there is a row of the far famed *Qui-wha*, or *Olea-fragrans*. In England we know nothing of the beauty of this charming plant. Here it is a fine ever-green bush, always handsome, and in the months of September and October literally covered with its fragrant blossoms. One tree is enough to scent a whole garden. I have often sat down under the shade of these very bushes, in the midst of this perfumed atmosphere, and almost fancied myself in the garden of Eden. R. FORTUNE.

* Named in compliment to Mr. Reeves, whose kind introductions have been of great assistance to me in China

CATAWBA WINE.—ADULTERATIONS AND FALSIFICATIONS.

As an evidence of the great importance our wine interest is assuming among the products of our country, the miserable attempt to palm off other brands at *auction* will show how highly ours are valued.

An instance of this kind has elicited an explanation from Mr. Longworth in the New York Tribune, which is here appended.

Sparkling Catawba Wine of Cincinnati.

A friend, recently from your city, informs me that, at the request of Mr. Leinau, a Wine Merchant on Front st., in your city has sent him a box of my Sparkling Catawba Wine, and charged him the invariable price here—\$12; and that Mr. Leinau expressed

surprise at the price, as he had recently bought my wine at auction in your city at \$8 per box. I have not yet been able to supply the home demand—have never sent a box to New York, or any other city, for sale. Our merchants who sell at \$12 have a commission. My wine has not only an engraved label on each bottle, but "N. Longworth, Cincinnati," branded on the end of each cork, and my name, and the name of the wine, and Cincinnati, with a circle of bunches of grapes round it, on each bottle. My wine never will be sold at auction. I shall esteem it a special favor if Mr. Leinau will ascertain who sent the wine to auction, and write me. That he will also compare the labels on the bottles, and the brand on the bottom of the cork. I have no desire to

have even French Champagne sold as my Sparkling Catawba. A merchant of our city writes me, that he was at one of your first Hotels, and called for a bottle of my Sparkling Catawba, which was brought to him. That the moment he tasted the wine, he found it had not the Catawba aroma and flavor. He examined the bottle, and found no label on it. He took up the cork, and instead of my brand on its end, found the name of a French house. From the character of the Hotel, I am satisfied this was a mistake of the waiter, who perhaps had never heard of Sparkling Catawba wine. Of the flavor and aroma of my wine, each person who drinks it can judge. I claim for it one superiority over imported champagne. It will be found to suit the stomach better, and be much healthier. It is the pure juice

of our native Catawba Grape, with the addition of the best Rock Candy. The French Champagne is made from a mixture of three or four different wines, which never can be healthy to the stomach. They say one kind is to give aroma and flavor; another strength; another effervescence. If true, our Catawba is superior, for it contains all these properties. Interest may have its influence even in France, as one of the wines used cost three times as much as the others. I expect next summer to have more wine than will meet the home demand, and shall then send to the Eastern and Southern cities, to Wine Merchants, to be sold at private sale, but never at auction. Any person who buys it and is dissatisfied with its quality, can return it to the agent, and receive back the full sum paid.

N. LONGWORTH.

THE SLEEP OF PLANTS.

THE way in which sleep is shown in the vegetable kingdom is infinitely more variable than among animals. Man throws himself prostrate; some kinds of monkeys lie on their sides; the camel places his head between the four legs; and birds roost their heads beneath the wing. Beyond these there are few remarkable differences. But in plants there is no end to the curious diversity which rewards the seeker after nature's mysteries. Some plants droop their leaves at night, the flat part becoming flaccid and pendulous. Others, of the kind called "compound," as clover and vetches, close their leaflets together in pairs, and occasionally the whole leaf droops at the same time. The three leaflets of clover bring their faces together, and so form a little triangular pyramid, whose apex is the point of union between the leaflets and their stalks. Lupines, which have leaves resembling a seven fingered hand without a palm, fold them together like a lady's half-closed parasol. Chickweed raises its leaves so as to embrace the stem; and some species of lotus, besides many of its elegant family, the Leguminosæ, bring them together in such a way as to protect the young flower-buds and immature seed vessels from the chill air of night. These are only a few out of the many cases which could be instanced of

change of position in leaves, whilst in flowers there seems to be no limit to variation. The greater part shut the petals at night, the stalks declining on one side, but there are some which roll their petals back, and curl them up like miniature volutes. The sleep of such plants is probably unaccompanied by any external change. The same may be said of campanulas and other bell-shaped flowers. The four petaled flowers of Cruciferae, it should have been observed, are remarkably careless of repose. Their sleep never appears sound or even constant, for many successive nights; and in the morning they always look dosy and uncomfortable. When flowers are overblown, or the plant, if an annual, is near its decay, the phenomena of sleep are very considerably diminished. In fact, they are only seen in perfection when the growing powers of the plant are in their full energy. Deciduous trees—that is, such as cast their leaves in autumn—are in a sort of trance in the winter months. Flowers, too, lose their sensibility altogether when the period of fertilization is passed, as may readily be seen by inspecting a field of daisies early in the morning, before the dew is off the grass. The overblown one will be found wide open; those in the younger stages all "crimson-tipped" and sound asleep.—*Exchange Paper.*

LONDON PARKS AND GROUNDS—PRIVATE GARDENS,—ETC.

LONDON, Aug. 6, 1851.

DEAR COLONEL:—To a stranger visiting London for the first time, nothing seems more astonishing than the extent of the public grounds in the midst of so large a city. You pass through the streets and find that there is not a vacant lot to be found. It appears rather as though this had been the case for centuries. You see the endless tide of life that is pouring through its thoroughfares and lanes, and the first thought is, where can bread be found for so great a multitude? You cease to wonder that every nook seems so densely tenanted, for how else could shelter be found for the innumerable horde. Then comes the feeling that with so many to feed, clothe and shelter, England must husband every foot of land with the greatest possible care.

With these thoughts you start for the great Exhibition of the World's Industry. You pass down Regent street, admire the splendor of those magnificent shops, unrivaled throughout the whole world for splendor. Sweep round the magnificent crescent, down into Pall Mall, wondering all the while at the piles of masonry, when suddenly the green lawns and shady walks of Green Park burst upon your vision like enchantment. It consists of about fifty-six acres, and is especially the Royal Park. Crossing it you come to Buckingham Palace, the town residence of Her Majesty, a pile of masonry less distinguished for architectural taste than extent of area. From a flag staff on the tower waves a silk banner to denote the presence of the royal mistress; if missing, we understand that she is "out of town." Adjoining Green Park is St. James's Park, shaped like a boy's kite, and containing about 87 acres. This Park is also furnished with walks, beautified with shade trees, whose rich, dark foliage is a peculiar feature of the English landscape, while the bright, green sward, soft and fine almost as silk velvet, finishes the enchanting picture.

Cornering with Green Park, or rather lapping by the corner of it for some rods, you approach Hyde Park, at present the great Exhibition ground, not for a nation, nor yet for a continent, but for the world. This con-

nects Green Park with the renowned Kensington Gardens, and contains some 400 acres; indeed there is one grand line of fields and Parks from the very out post of the Royal demesne, the Horse Guards, to Primrose Hill. Hyde Park alone, contains about 400 acres. These Parks are appropriately called "*the lungs of London*," for as resources for health, they are of inconceivable importance. Regent's Park, so named in honor of George IV, during his regency, constitutes one lobe of these great lungs and covers an area of about 500 acres.

In these beautiful grounds, the population of London are free to ramble, and on a pleasant week-day afternoon, and Sabbath evening, thousands and thousands of men, women and children resort here to breathe God's free air and look upon green fields and shady lawns with the noise and din of the great city cast out.

Without these vital organs, it is scarcely to be conceived that London could enjoy even a tolerable degree of health and consequent prosperity. In passing through these immense pleasure grounds, one quite forgets that he is in the city but feels all the freedom and elasticity of rural life. The green leaves act as a laboratory for the consumption of the gases that would otherwise destroy human health, while at the same time they send forth that most essential of all properties to animal life, oxygen.

In noticing the features of London, I could not but turn with some solicitude to the young, and as yet vigorous cities of my own dear land. There, no government property has been set apart for such purposes, and individual liberality has in but few instances provided even small grounds for public resort. This is a great mistake that our Western pioneers have made. They could not have left so acceptable a legacy to the future, as wild lands in the very midst of city plots. Then, let the people thin out the exuberant growth, and see that a beautiful green sward is made to carpet it, and there would be a dispensary of health and happiness for coming ages, worth more than all the prescriptions of the doctors of all schools.

This want is scarcely perceived, while the

great forests remain in the very suburbs of our towns; but this is not to last for many generations. Let a century pass over Columbus, and all the environs will be thickly peopled and carefully cultivated. What chance then for securing pure air and kindly shade. Now is the time to take this matter thoroughly in hand. I learned with great pleasure that Dr. Goodale had signified his intention of giving a fine park in the northern part of that city, and I then said, and I now repeat it with a still deeper conviction, that he will do more for the health and prosperity of the city, than the founder of that magnificent structure the Starling Medical College; for magnificent it would be regarded even in Europe. Who will give a similar one on the south? Stuart's grove ought never to be cut down, and if no individual feels sufficient interest in the matter to give the requisite amount of land, our City Fathers would do well to begin to lay the matter before the public. There are still unoccupied lands east of the Lunatic and Blind Asylums; let them be secured by the city before it is too late, or in a few years it will be quite impracticable. Who will first move forward in this matter?

I ought not to omit to name that in the Regent's Park there are various attractions that seem to form a kind of educational amusement for the many. There are the Zoological Gardens, the Royal Botanic Gardens, and the Colosseum. This last is devoted to works of art upon a magnificent scale. Around the circular walls is a panoramic view of Paris occupying 80,000 feet of canvas. Here too is a museum of rare sculpture; a Gothic Aviary, Classic Ruins, Arbuesyne conservatories of Exotics, the Staladite Caverns of Adelbery and a multitude of other curiosities that I have not time to name. These are not free but admission may be had at a small charge, and they form attractions that draw strangers and even the permanent residents from the allurements to vice that are so numerous in such a great city.

The Surrey Zoological Gardens are private property, but they are thrown open at a small cost for the entertainment of the public. They consist of about 16 acres of land, laid out with a great degree of taste and decorated in a manner that makes them truly fascinating, though one is tempted to smile when he sees that the rich effect of ancient

temples, triumphal arches, distant mountains, and even costly sculpture, is produced by the cunning use of a few rough boards, a quantity of canvas, and a very daubing but effective application of oil paint. Here are mimic lakes, beautiful grottoes, gushing fountains, shady groves and plants of flowers. Above one of these fountains, trickling over a grotto of stones and sea-shells, and hung with mosses of the softest green, reposes the statue of old Neptune—his hoary beard of ocean-foam falling into the trickling fountain. On the lake floats a little yacht, that looks as if made to be rowed by fairies, while swans and ducks sport as gaily as though it were their native flood. Crossing the inlet to this, and forming a river, that gives much beauty as well as freshness to the grounds, is a Remington foot-bridge; quite a curiosity in its way, for, though a suspension bridge, you see nothing to which it is suspended. It is formed by four strong pieces connected, or rather continued, to any desirable length, by cementing together small strips of wood, not larger than common scantling, if so large, and upon these is nailed the floor of the bridge, and all is attached to abutments at the two extremities. It is a frail looking thing, but in its elasticity is said to be its great strength.

The fireworks in the evening, together with musical entertainments, constitute great attractions for multitudes, while the Vauxhall Gardens draw the lovers of gaiety in crowds, during the season. Here you see fireworks, music and dancing. These gardens occupy about six acres of ground, and are tastefully laid out in groves, grottoes, covered arcades, and picturesque temples, illuminated in the most splendid manner with colored lamps. These are among the most ancient of the resorts for amusement to be found in London, having been opened in 1661, and then known as the New Spring Gardens.

To these Parks and Gardens we should add the names of several out-of-town resorts, that are still in close proximity to London, such as Gravesend, the birth-place of Elizabeth, Greenwich, visited for its observatory, Rochester, Chatham, Kew, Richmond, Twickenham, Hampton, and many other pleasant rural villages to which the Londoners often go in summer, and which the visitor finds most delightful retreats from the continual din of the metropolis.

Yet, with all these, there have been recent

additions made to the public grounds. Victoria Park, consisting of about 290 acres, has quite recently been opened in the north-east part of the city, designed especially for the inhabitants of Spitalfields and Bethnal-green. At the entrance, a handsome lodge, in the Elizabethan style, has been erected, which is reached by crossing an elegant iron bridge. Near the lodge is an ornamental piece of water, about four acres in extent, and close to this is a building in the Chinese style. Here are arrangements for bathing, cricket, football, archery and gymnastic sports. It is said that 30,000 persons have been seen in the park on a summer's day.

Besides the Parks already named, one has been planned for Bathusia, and another for Finsbury. The estimation in which these Parks are held by the people, may be inferred from an anecdote related in point. One

of the late kings was desirous of choosing St. Jame's Park for his own private pleasure, and he inquired of one of his ministers what he supposed the cost might be. "Only a *Crown*, your Majesty," was the significant reply.

Another feature of London I may as well name here. It is the "crossings," as they are called, of the principal streets. In the center of the crossing is laid a pave of stone, frequently around a column, and on this, passers may await in safety the arrival of any conveyance they may be looking out for, without being jostled or swept on unwillingly by the crowd on the side-walks, or endangered by attempting to cross the streets when there might be a press of carriages. If you can reach the crossing, you are safe from molestation.

Yours, truly,

H. M. T.

Statesman.

TEA CULTURE.

For some months this topic has been in my mind to present to the readers of our periodical, as one which deserved a share of their attention. It has been quietly working its way into public favor, ably supported by the strenuous efforts of Dr. Junius Smith, who has been successful in his undertaking, as appears from the following, which was found in the Marietta Intelligencer:

The last accounts in regard to the progress of the tea plant in South Carolina, under the cultivation of Junius Smith, LL. D., stated that the experiment was working finely. The following extract of a letter from that gentleman, under date of July 4, shows that he has met with final success—an experiment to which he has devoted a large fortune:

"I have now before me a pot of fresh green tea from my own plantation—the first I have enjoyed. Having no experimental evidence, in this country, of the effect of curing by solar heat only, contrary to the Chinese, Indian and Javan mode of curing by fire and roasting in iron kettles, I felt some reluctance to exposing this, my first experiment, to the public gaze, and there-

fore conducted the whole, from the picking of the leaves to drinking the tea, in a private way. I am much gratified with the result of this, my first effort in manufacturing American tea. The drying is so simple that any farmer in the Union can make his own tea, with the same certainty and with the same ease as he can make his own bread.

"The fragrance is not so high as imported Hyson tea, but the taste is far more pure and clean in the mouth, although it leaves the stamp of fresh made tea, or rather, a tea from a fresh leaf. It has not the slightest disagreeable taste, but has a full, delicious flavor, indicating, in an eminent degree, perfect purity, and the presence of a sweet, refreshing beverage. Connoisseurs will, perhaps, measure the quality of my tea by their own, to which they are accustomed. But the comparison will not hold good. My tea is so peculiar, as I always use it in the Chinese way, without sugar or milk, and have the taste of the tea only, and can not easily be mistaken in the flavor and true properties of the tea. If the tea be good any thing and every thing added to it is a detriment. If bad, use as much sugar and milk as will neutralize the bad qualities, and leave nothing but the taste of sugar and milk. I do assure you that I

am so delighted with my pot of tea, that I have drank of it half a dozen times whilst writing this article, and nearly exhausted the tea pot. My black tea plants, since their removal in April, have grown much slower than the green tea plants. Indeed, the green tea plant is a much more hardy plant than the black.

ENTOMOLOGICAL.

THIS communication has been sent in by a valued correspondent, and though not strictly horticultural, is gladly received, because it refers to an entomological pest that affects the gardener as well as the farmer—whose interests, indeed, are often so blended that it is difficult to separate them.

I hope the observing writer will often favor us with the result of his studies in natural history, and that, too, *directly*, since these columns are offered freely for all such communications.—ED.

"FRENCHED" CORN.

WHEN growing corn is about a foot high, or less, it sometimea assumes a pale yellowish, and sickly appearance, which, in Kentucky, is called "frenching"; perhaps from the ancestral prejudice that all things excellent were derived from the English, and all things inferior or bad were derived from the French.

This change comes over the growing crop in the space of a few days; prevails only in particular portions of the fields; has no regard to exposure, soil, or present cultivation; lasts for several weeks; during which time the plants stop growing; the lower leaves die; the whole plant looks withered, pale, and sickly; and many of them die entirely.

In the meantime the farmer plows and hoes his crop with industry, and invokes rain and sunshine by turns; but all to no purpose, for still the crop is hopeless on the affected portions; and his spirits are desperate.

In passing through these "frenched" por-

tions, he observes in the hills and near the stalks, a little hole with some finely pulverized earth about it; in and out of which a multitude of ants, of various species, are passing. He supposes that the cause of the malady is discovered, and volleys of imprecations are poured out upon the unoffending ants by the whole neighborhood in which the "frenching" prevails.

But if a more inquisitive farmer will take up a plant carefully by the roots, he will find the horizontal roots, near the base of the plant, surrounded by numerous other insects quite different from the ants. They are about the size of a pin's head or less; of a greenish color, spotted with brown or black; of an oval form, with antennæ or horns, and six legs; and with a singular horny projection on each side of the hinder portion of the back. A life-size, and a magnified drawing of this insect are given in the Agricultural part of the Patent Office Report for 1850-51, in which, though not described, it is called the "Bean Louse, or Aphis."

Some persons suppose that these insects are the young of the ants; but this can not be, as the ant does not undergo such a change, but is hatched from the egg of the female ant, and, being attended and fed by the neuter ants, the young ones emerge, almost fully grown, from the larva; and commence immediately to fulfill their offices, whether male, female, or neuter.

Entomologists inform us that from the two horny projections on the body of the Aphis, it emits a sweetish liquid, upon which the ant delights to feed; and even that the ants will

sometimes carry off and and take care of the Aphides, for the purpose of feeding on this liquid, which the ant is said to cause the Aphis to emit at pleasure; hence, writers on insects sometimes call these Aphides the "cows" of the ants.

While observing these insects under a microscope, I have myself seen them emit the liquid; and when I placed the roots of the corn which contained them, in the basement window of my room, they were immediately and repeatedly found and carried off by ants.

On a further examination of the Aphis by a microscope, it will be found to carry, carefully folded under the body, an enormous proboscis, projecting from the head, and extending two-thirds the length of the body. These the numerous Aphides insert into the tender roots of the plant, and exhaust it by extracting the sap which should be appropriated to the nourishment of the plant. Perhaps the numerous wounds effect the death of more or less of the roots, and the

plant dies or languishes until others are produced, and until the corn outgrows the insect, or until the season for its ravages is passed.

To drive these insects from their unwelcome homes, rolling the corn in tar before planting, drenching the growing plants with offensive liquids, such as soap suds; or a top dressing of ashes might, perhaps, be used with beneficial effect. But the safest alternative may be found in exposing the soil to the action of the frosts, and snows, and rains of winter, by means of deep fall plowing and thorough pulverization; thus sweeping, in one indiscriminate destruction, the eggs of both ants and Aphides.

The season for this operation is almost at hand, and the "Michigan Double Plow,"—sold by Doxon & Graham, of Frankfort, Ky.,—is the best instrument with which to perform the operation,

ROBERT W. SCOTT.

Locust Grove, Franklin Co., Ky.

THE NEW YORK STATE-FAIR

Was held at Rochester, on the 17th, 18th, and 19th of September, and a truly magnificent affair it was. The people were there in their might to witness the glorious results of their own and their neighbors' enterprise and ingenuity; and such an outpouring of the multitudes has seldom been seen. Thousands upon thousands of happy faces were seen passing about those grounds, and examining the numerous articles there exhibited. Truly these exhibitions are a great idea in the present age, and will produce grand results. New York has gloriously taken the lead, and our own state follows wisely in her wake. Indiana promises to follow, and boasts that she will rival us—so look out for a race in the good work that opens before us.

To attempt a description of the display

upon the Fair Grounds at Rochester, would be futile; and as it would be without the range of this periodical to describe or even to allude to all the various articles there exhibited, I shall confine myself almost exclusively to the contributions of our own department, in Floral Hall, which was a large oblong tent for the Fruits, Flowers, and Plants, and a large round tent adjoining, in which was a most profuse array of Vegetables. Even here it must be a mere bird's-eye view that can be presented, since a description of the whole would require more time and patience than I can command.

The tent embraced a long table, making the complete circuit, and composed of several benches or shelves, upon which the Fruits were displayed; these were protected by a

simple but very pretty and fanciful fence of saplings. Within the path and similarly protected, was a flat table, upon which were multitudes of Dahlias, Roses, Phloxes, Verbenas, and other flowers, beside the designs; and within this circuit were two large stands, beautifully covered with Green House Plants and Shrubs, from the neighboring gardens and nurseries, that were very creditable to them. One collection especially, from Mount Hope Nursery, was very attractive. In the center of all was a novel feature, which reflects great credit upon Messrs. L. A. Ward and Ellwanger, who erected there a great tree, supported by rock-work of a very natural and tasteful appearance, among which were a number of plants, growing as though naturally, Cacti, Ferns, etc., in great variety, and according well in character with the stony *habitat* of their assumed growth, while from the branches of the old Oak, which seemed to spring from the earth through the mass of rocks at its base, the stuffed squirrels and birds appeared to be looking complacently upon the gorgeous show below and around them, or contemplating the rich baskets of fruits suspended among the boughs. These are new features in the arrangement of the Floral Hall, and the hint may be improved upon in future exhibitions—at any rate it reflects great credit upon the ingenuity of the superintendent and his aids.

A hasty glance is all that can be taken in the confusion incident to such exhibitions, where there is so much to see and so many to behold. The vegetables were exceedingly creditable to their producers, in their size, quality and quantity, as well as variety. Notwithstanding the prevalence of the potato disease in many portions of the State, the display of this standard crop was very fine and many new varieties were exhibited—seedlings and imported kinds.

Pumpkins and squashes of every grade,

color, shape and size abounded, and contributed to enrich the show, to the joy and delight of the Yankees. Cabbages that would have rejoiced the heart of the dwellers of Kinderhook, were arrayed in platoons upon the tables.

Egg plants of the greatest beauty and size that I have ever beheld, excited my own gastronomic desires; among them was one from Warren County, Ohio, forwarded by "the candy-man," of the Little Miami Rail Road cars, B. B. Hay. This specimen weighed seven pounds when fresh, but as it had suffered upon the journey it could not compare with the freshly gathered specimens. The celery was much finer than we ever have it in our more southern latitude at the same season; indeed, we cannot compete, in this article, with a cooler and more humid climate. Sweet potatoes on the contrary, though very good, are not equal to our own, or those still further South of us; indeed, I should think that almost any portion of the State was too cold for the profitable production of this crop.

Carrots, Parsnips, Beets, Radishes, Turnips, Peppers, Tomatos, Cucumbers, Cauliflowers, Beans, Parsley, Onions, Corn, and many other vegetables appeared in profusion, and added to the interest of the exhibition in the vegetable tent.

The Fruits in the large tent made a truly magnificent display—the number of contributors being large and their exhibitions liberal. Delicious peaches were displayed in rich and tempting profusion—the immediate vicinity of Lake Ontario appears to be well adapted to their growth. Plums of many kinds attracted much attention; among them were fine collections from Mr. Dow, of Albany, Ellwanger & Barry, of Rochester, who showed the Reine Claude de Bavay, a fine fruit and great bearer, and from others; the Jefferson especially, in the collection of S. Ainsworth, of Bloomfield, attracted great praise on

account of its high coloring, as most of the specimens had a rich blush on one side, owing to the dry and hot weather. These fruits appear to suffer less from the curculio here, than in some other sections of the country.

Grapes, grown under glass, were truly magnificent and were shown in great variety and profusion, indicating liberality as well as skill in the growers. The largest and finest collections were from Bissell and Hooker—who furnished an abundant supply to the tables of the festival, given by the city authorities at Corinthian Hall, on Thursday night, of which more, hereafter, under an appropriate head; but to return to the grapes—it was said that the eastern growers had so amply supplied the market that the price was reduced to fifty cents a pound.

The out-door grapes will not compare with those grown in a more genial clime. Isabel-las were pretty well ripened, but our own Catawbas, sent by L. Rehfuß, were of a darker color than the plates of Isabella beside them; and the visitors who rarely see the Catawba of a deep red, could scarcely believe that these were not a different grape. The Burgundy was shown, but neither so ripe nor so large bunches as those sent from L. Rehfuß. The Clinton Grape is better adapted to this climate on account of its earlier period of ripening; the bunches are small and scattering, however, and the juice not sufficiently abundant nor rich here, to make it valuable as a wine grape; in this particular it can never compare with our Missouri, Ohio or Herbemont, though rather pleasant for the table. Foreign grapes do not appear to succeed any better in the open air here, than with us, although some good crops have been produced on foreign vines for a year or two in a few instances.

Pears were presented in great profusion and variety; the competition was for the largest collections, for the best Autumn, and

for the best new varieties; but the contributors did not always arrange their collections, so as to compete for the prizes, in a proper manner; the principle should be established, if it be not already understood, that no collection of articles should be allowed to compete for premiums in two classes, and the competitor should enter his contribution in the class where he means to compete and designate it accordingly; this would spare the examining committees, or jurors, a world of trouble and responsibility, and would afford the small and the great cultivators a more equable chance in the race, especially where there is no distinction between the professional and amateur lists.

The fruit, however, of this kind was most interesting, the varieties exhibited were very numerous, and the specimens in many plates were perfect. All this indicates enterprising pomologists, excellent cultivation, and judgment, and still more, extended propagation from which to select for such an exhibition. The largest contributions were from Messrs. Ellwanger & Barry, of Rochester, Morse, of Cayuga Bridge, B. Hodge, of Buffalo, Thorp, Smith, Hanchett & Co., of Syracuse, Bissell and Hooker, Rochester, and very handsome displays from several others. These collections embraced a large and varied assortment of this delicious fruit. The greatest parade of new varieties was from the Mount Hope Nurseries, although several superior varieties were found among those brought from Syracuse, such as the Goubault, Fontenay Vendée, Doyenné Dufais, Boussock, Jalousie de Fontenay, Soldat Laboureur.

The apples were very good, and much larger and finer than we are led to expect, when we hear eastern men praising the size of our western products. Many standard varieties were presented by several contributors; among them it was pleasant to see the "Vandevere," (our Ox-eye) Newtown Pippin,

apparent to every one that they are admirably calculated to enhance our prosperity as a manufacturing community. Other cities, were before us in seeing this, and have taken the lead, but the fair just held here, was sufficient to show that when our citizens are thoroughly alive to the importance of anything, we may set competition from abroad at defiance.

Fortunately for the success of the fair, in a monetary point of view, the weather on both days, was very fine. We have never before seen our citizens take so great an interest in anything as in the exhibition of the second day. From morning till night, the inclosure was almost uncomfortably crowded by thousands, and every thing worthy of attention was constantly surrounded by a dense throng of persons, inspecting it.

Nearly every branch of our manufactures was represented, and we were pleased to see

the neat manner in which the articles were made; not that any, with a few exceptions, were constructed especially for the fair, because the manufacturers had not sufficient notice, and the exhibition was therefore the more gratifying, inasmuch as it demonstrates their practical excellence. When without any special preparation they can do so well, what could they do, were they to set themselves seriously to work and prepare for one! Next year, we venture to assert, we shall have an exhibition, which will throw into the shade any State Fair ever held West of the Allegheny Mountains.

On the first day Col. Hiram Hultz delivered a neat and practical speech to the Society, and on the second, the honorable Walter H. Lowrie, addressed the assembled multitude, in a speech of great power and eloquence.

CINCINNATI HORTICULTURAL SOCIETY.

SEPTEMBER has been a very dry month; as we had no rain to refresh the flowers, nor even to moisten the earth for the support of plants in the ground, and no fruits from the trees, so there has been very little of interest exhibited at the meetings of the Society. The organization has however been kept up, by weekly meetings, at which there have been some interesting discussions chiefly in relation to the grape crop, which it was supposed would be very rich though short in quantity. Several of the new kinds received from various parts of the country were laid upon the table at different meetings, and, strange to say, most of them, though highly praised by those who had sent the cuttings, were pronounced worthless—this only shows the misfortune of a cultivated taste, the inevitable result of our consociation; bringing together all the best fruits, and what each one considers the best, we insensibly learn to like those only which are truly good—and at length wonder how any person can think a Fox Grape palatable or even edible.

The Diana Grape which unfortunately fail-

ed here this season, disappointed its friends, who do not yet despair, however, as its failure may be attributed to the effects of the drought, the berries shriveled before ripening and were devoid of flavor. Its rival in this region is the Catawba, which is finer than ever, despite the dry weather, perhaps even in consequence of it—and it will require some years of favorable comparison to induce our wine vintners to plant a hundred Dianas if they can find a *cutting* of the Catawba. The Herbemont, the Lenoir, and the Cape have also done well, but the Isabella still continues to lose favor in the vineyards from which indeed it has nearly disappeared, though ripening pretty well and evenly on high trellises and on trees.

The Gardener members of our Society have been actively engaged in preparing their specimen plants for the Autumnal Exhibition, carrying water to their borders, and waging war generally upon the grass-hoppers that threaten to devour every *green* thing, as they have had a scarcity of their favorite pasturage, the Dahlia blooms—of which, by the by,

one gardener has a variety that has appeared to check their depredations—he says, because it is so fiery red—"Phoenix" is indeed one of the finest scarlets in our gardens.

BUFFALO HORTICULTURAL SOCIETY.—AUGUST MEETING.

THE Committee on Flowers and Flowering plants, beg leave to offer the following report:

Your committee beg leave for a moment to take a more general glance at this beautiful exhibition, as a whole, than merely pertains to their department. And,

1st. The arrangement was in most excellent keeping and good taste. The bouquets of various sizes and forms, with their endless shades of tint and color, were gracefully intermixed and interwoven with delicious fruits and floral ornaments; and although in quantity we have not come up to former shows of this month, yet in quality it is very gratifying to perceive such prominent improvement in the elegance and perfection of the varieties. Indeed, the members have well kept pace with similar co-workers abroad. The dahlias and asters were splendid, rich in colors, and beautifully grown. The pyramid of asters from Mrs. L. Eaton, need only to be seen to be admired. Each and every flower, of every hue, was perfectly quilled to the center, and tastefully blended, giving the *tout ensemble* an artificial appearance.

The President exhibited forty varieties of dahlias, under name, and the Messrs. Bryant twenty-seven, gorgeously rich and beautifully perfect. The pyramids of these gems of autumn were highly tasteful and decorative, and formed prominent features in the exhibition. The floral basket of Miss Lucy Bryant was tasteful and beautiful. The bouquets from Miss M. A. Eaton, and those from the Misses Pratt, were very fine, composed of roses of various classes, asters, verbenas, pansies, etc., etc.,—all superb specimens. Mr. Westphal, as usual, presented a beautiful display. Mr. W. seems to aim, by his contributions, to keep pace with the progress of horticulture. To the Ladies' Committee of arrangements, great credit is due.

Then follows a list of cultivators and their several contributions.

The premiums are as follows:

For the best collection of dahlias, to Mr. Hodge—diploma.

For the second best collection of dahlias, to Misses Bryant—\$1.

For the best collection of Asters, to Mrs. L. Eaton—\$2.

For the best collection of verbenas, to Mrs. P. B. Eaton—\$2.

For the best bouquet, to Miss M. A. Eaton—\$2.

Discretionary, to Miss Lucy Bryant, for basket—\$2.

W. R. COPPOCK,

ELIJAH FORD,

For the Committee.

REPORT OF THE FRUIT COMMITTEE.

The committee remarked that the exhibitors of fruit are all, with one or two exceptions, entitled to the highest credit, for the remarkable growth, and choice varieties, of their fruit—all, indeed, worthy of premiums and especial commendation; but as the rules of the Society in awarding premiums are imperative, the committee can only award to the best varieties of seasonable fruit, the premiums allowed; and the awards now made are only to be considered as such, not that the specimens of such exhibitors are any better, perhaps hardly as good, as those of some who exhibited a less number. It might appear invidious, where the fruits were generally so good, to mention names; but the committee can not in justice, withhold their especial approbation, by the award of diplomas, as the evidence of the highest merit in plums, to Dr. G. F. Pratt, Messrs. J. R. Prince, and L. F. Kendall, but it is well to remark that two of these gentlemen are most indebted to the soil on which the fruits grow, for their superiority; yet the high cultivation of their fruit on that soil, deserves great credit.

Taken altogether, the exhibition has exceeded all previous ones in the high quality and fine varieties of the fruit displayed, and would do credit to any show yet made at

the exhibition of the State Agricultural Society.

To Messrs. Morse and Houghton, of Cleveland, the Society is deeply indebted for several varieties of choice peaches sent for exhibition. The specimens are highly creditable, for growth and high cultivation.

An extended list of fruits was furnished by several amateurs and fruit-growers, which presented a very handsome exhibition, and one altogether creditable. Among the fruit are many names that are new to us. The following awards were made:

PREMIUM.

For the best collection of summer Apples, Bryant and son—\$2.

For the best collection of summer Pears, B. Hodge—\$2.

For the best collection of Plums, Dr. Pratt—Diploma.

For the best collection of Peaches, B. Hodge—\$2.

For the best collection of Apricots, Dr. Pratt—\$2.

For the best collection of Grapes, (under glass)—Prof. Coppock—\$2.

Discretionary premiums to Messrs. Prince, Kendall, and Morse & Houghton—Diplomas.

For the Committee,

L. F. ALLEN,

H. W. ROGERS.

B. HODGE, President.

JOHN B. EATON, Secretary.

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.

CONDENSED FROM THE ALBANY PAPERS.

THE annual autumnal exhibition of the Society was held at the Geological Rooms, State street, on Wednesday and Thursday, the 10th and 11th days of September, 1851. Every department was creditably represented, and the profusion of plums, pears and apples, among the fruits, and dahlias, roses, verbenas, phloxes, etc., among the flowers, has seldom, if ever, been surpassed by any former show of the society. Although the weather was exceedingly hot, and the atmosphere unusually heavy and oppressive, for this season of the year, large numbers of ladies and gentlemen assembled to examine the varied products of the garden and orchard—furnishing unmistakeable evidence of the popularity of these exhibitions, and the steady increasing desire to obtain a full knowledge of horticultural pursuits.

Fruits

Were exhibited in great profusion by very many contributors, to whom the following awards were made.

PREMIUMS.

APPLES.—Best and most extensive collection, to E. P. Prentice, for 32 varieties. - - - \$3 00
2d best and most extensive collection, to B. B. Kirtland, for 17 varieties - - 2 00

Best six varieties, to B. B. Kirtland, for Baldwin, Swaar, Esopus Spitzburgh, Rhode Island Greening, Westfield Seek-no-further, and Newtown Pippin - - - 2 00

Best one variety, to B. B. Kirtland, for Rhode Island Greening. - - - 1 00

PEARS.—Best and most extensive collection, to Henry Vail, of Ida Farm, Troy, for 50 varieties: Beurré Diel, Beurré d'Aremberg, Bezi de la Motte, Brown Beurré, Columbia, Dearborn's seedling, Dix, Duchesse d'Angouleme, Easter Beurré, Flemish Beauty, Fondante d'Automne, Frederick de Wurtemberg, Gansell's Bergamot, Glout Morceau, Golden Beurré of Bilboa, Grey Doyenné, Louise Bonne de Jersey, Louise Bonne d'Avaranches, Maria Louise, Passe Colmar, Seckel, Van-Mons Leon le Clerc, Vicar of Winkfield, White Doyenné, Winter Nelis, Jalousie de Fontenay Vendée, Napoleon, Heathcote, Inconnue, Knight's Monarch, Dunmore, Onondaga, Henry IVth, Cannais, Beurré d'Amalis, Sieulle, Excellentissima, Soldat Laboureur, Duchesse d'Orleans, Beurré Goubalt, Belle, Urbaniste, Summer

Bergamot, St. Germain d'Hiver, Fortunée, Capsheaf, Doyenne Variegata.
 Bartlett, Andrews. - - - 3 00
 2d best and most extensive, to Joel Rathbone, of Kenwood, for 14 varieties. - - - 2 00
 Best six varieties, to Henry Vail, of Troy, for White Doyenné, Seckel, Glout Morceau, Bartlett, Louise Bonne de Jersey, and Beurré Diel. 2 00
 Best one variety, to John S. Gould, of Albany, for White Doyenné. - - 1 00
PLUMS.—Best and most extensive collection, to E. E. Dorr, for 20 varieties, viz: Yellow Gage, Blue Gage, Mussle, Red Gage, Siamese, Caledonia, Washington, Lawrence, Imperial Gage, Reine Claude, Jefferson, Denniston's Superb, Wasp, White Magnum Bonum, Prune and seedlings. - - - 3 00
 2d best and most extensive collection, to Isaac Denniston, for 20 varieties 2 00
 Best six varieties to Isaac Denniston, for Reine Claude, Lawrence, Washington Bolmar, Purple Gage, Buel's Favorite, Bleeker's Gage. - - 2 00
 Best one variety, to E. Dorr, for Reine Claude. - - - 1 00
 Best seedling, never before exhibited, in class of dark colored fruits, to Henry Hallenbeck, of Greenbush, for a very large reddish purple plum of best character, named by the committee Hallenbeck Plum. - - 2 00
 Best seedling, never before exhibited, in class of light colored fruits, to Isaac Denniston, for a medium sized light yellow plum with reddish cheek of beautiful appearance and best character, named by Mr. Denniston, Dorr's Favorite. - - - 2 00
PEACHES.—For best and most extensive collection, to E. Wood, of Watervliet. - - - 3 00
 2d best, to Dr. Samuel Dickson, of New Scotland. - - - 2 00
QUINCES.—Best and most extensive collection, to E. P. Prentice, of Mount Hope. - - - 3 00
 Best one variety, to John S. Gould, for Orange Quince. - - - 2 00
GRAPES.—*Foreign.*—Best two varieties, to Henry Vail, of Troy, for

Black Hamburgs and White Frontignans. - - - 2 00
 Best one variety, to Erastus H. Pease, of Albany, for Golden Chasselas. - 1 00
GRAPES.—*Native.*—Best exhibition, to E. E. Dorr, of Albany. - - - 3 00
 Best two varieties, to E. H. Pease, for Catawbas and Isabellas. - - - 1 00
 Best one variety, to J. H. Cary, for Isabellas. - - - 1 00
MUSK MELONS.—Best two varieties, E. E. Dorr, for Beechwood and Green Citrons. - - - 1 00

Greenhouse Plants.**PREMIUMS.**

For the best six plants, viz: *Yucca aloefolia*, *Æschynanthus grandiflora*, *Protea cynaroides*, *Ixora crocata*, *Rondeletia speciosa*, and *Roches falcata*, the premium of \$3 is awarded to L. Menand.

Cut Flowers, Bouquets, etc., were very abundant.

Dahlias.—Under this head the display was very fine, and so close was the competition between Messrs. Wilson, Van Alstyne and Newcomb, that the committee had no little difficulty in making their awards; but after a careful comparison, they have decided as follows:

For the best display, the premium of \$3 is awarded to James Wilson.

For the best 12 dissimilar blooms, viz: Joshua Longstreth, Richard Cobden, Roi de Pointelles, War Eagle, Madam Zahler, Miss Vyse, Miss Chapman, Star, Minerva, Metropolitan Queen, Prince Albert and Emperor of Morocco, the premium of \$2 is awarded to E. M. Van Alstyne, of Greenbush.

For the best 6, viz: Gem, Cleopatra, Madam Zahler, War Eagle, Lady of the Lake, and Lady of Sussex, the premium of \$1 is awarded to Wm. Newcomb, of Pittstown.

For the best specimen, (box) the premium of \$1 is awarded to James Wilson.

Roses.—For the best 10 dissimilar blooms, the premium of \$2 is awarded to L. Menand.

For the best 6, the premium of \$1 is awarded to James Wilson.

Phloxes.—For the best 10 varieties, viz: Eliza, Princess Marianne, Albany, Anais Chauviere, Alba Kermosine, Goethe, Grandis, Speciosa Americana, Picta, and La Reine, the premium of \$2 is awarded to James Wilson.

For the best 6 varieties, viz: Speciosa, Americana, Alba Kermosine, Chateaubriand, Madam Rigatu, Anais Chauviere, and one not named, the premium of \$1 is awarded to L. Menand.

German Asters.—For the best display, the premium of \$2 is awarded to Wm. Newcomb.

For the second best display, the premium of \$2 is awarded to Wm. Jones.

Verbenas.—For the best 12 dissimilar blooms, viz: Robinson's Defiance, Iphigene, St. Marguerite, Striped Eclipse, Anacreon, Reine de Jour, Beauty Supreme, Paul et Virginie, Sir Seymour Blane, and Clotilde, the premium of \$2 is awarded to D. T. Vail, of Troy.

For the best 6, viz: Kossuth, Bicolor Grandiflora, Harlequin, Graciosa, Ariel, Jacksons' Purple, the premium of \$1 is awarded to James Wilson.

Floral Designs and Bouquets.—For the best, most beautiful, and most appropriate floral design, the premium of \$3 is awarded to Wm. Newcomb of Pittstown.

For the best round bouquet, for center table, the premium of \$2 is awarded to Joel Rathbone.

For the best flat mantel bouquet the premium of \$2 is awarded to Wm. Newcomb.

For the best round hand bouquet, the premium of \$1 is awarded to James Wilson.

For the best basket bouquet, the premium of \$2 is awarded to Wm. Newcomb,

Vegetables.

PREMIUMS.

Best half peck of winter potatoes, Joel Rathbone	\$1
Best Winter squashes, E. P. Prentice	1
Best long blood beets, V. P. Douw	1
Best carrots, Joel Rathbone	1
Best parsnips, V. P. Douw	1
Best egg plants, Joel Rathbone	1
Best winter cabbage, Joel Rathbone	1
Best brocoli, J. S. Gould	2
Best celery, V. P. Douw	1
Best martynias, W. Newcomb	1
Best tomatoes, E. Dorr	1
Best exhibition of different varieties of tomatoes, Wm. Newcomb	1
Best Okra, V. P. Douw	1

The committee further recommended that a discretionery premium of one dollar be awarded to Jefferson Mayell for his very fine specimens of Shaw and Mountain-june potatoes. And that a like premium be given to J. Rathbone for having the largest and most extensive display of vegetables at the exhibition.

AURORA HORTICULTURAL SOCIETY.

THE 7th annual Rose Exhibition of the Aurora Horticultural Society, will be held in remembrance by those who were present, as abounding in many of those pleasant circumstances which have contributed, on former occasions, to make these gatherings particularly pleasant and agreeable. The day was as propitious as cloudless skies, a bright sun, agreeable temperature, the bursting buds and fragrant blossoms of June, could make it. The large exhibition hall, and the adjoining rooms of the academy, were filled at an early hour, by an audience who very evidently came to be pleased and to admire. The portion of the room allotted to flowers was well filled with choice collections of cut flowers, of every

possible form and hue, beautifully arranged in family groups, in gaudy single specimens, in bouquets, in floral ornaments, and in every other shape that a refined taste could suggest, or cultivated skill could devise. Conspicuous in the display, the Queen of Flowers maintained the pre-eminence which by common consent has been awarded her; and no attribute of her loveliness was more charmingly conspicuous than her unconscious blushes, which imparted a brighter hue and deeper glow to the budding beauties of her blooming rivals.

The members of the Fruit Committee, doubtless, thought the collection of fruit the most *tasty* part of the exhibition, from the number of specimens which had disap-

peared at the close of the examination, and from the eulogiums passed in their report upon the size, quality and flavor of the different varieties. The audience had every reason to infer that many of the kinds were of surpassing excellence. Indeed, it was the general opinion that a fruit committee has rarely sat in judgment upon a more superb collection of that delicious fruit, the strawberry. Appropriate and eloquent remarks were made by Benjamin Joy, Esq., of Ludlowville, and the Rev. Mr. Chapman, of Aurora.

It was the subject of regret to the whole audience, that indisposition prevented the attendance, for the first time since the origin of the society, of our worthy and venerable President, David Thomas.

Much credit is due to the young ladies and gentlemen of Aurora, under whose supervision the room was appropriately decorated with evergreens, and the flowers, fruits, and various other objects in exhibition, neatly and tastefully arranged.

In the list of contributors, the names of individual species of fruits, plants, and flowers, in the main, have been omitted for want of room.

From the garden of the President, David Thomas, Greatfield, a superb collection of Roses, of 129 varieties, in full bloom, including Bourbon, Noisette, Scotch, Ayrshire, Boursault, Hybrid Perpetual, Moss, China, Bengal, and Tea Roses. Also, an extensive collection of miscellaneous flowers, three vases of bouquets, very tastefully arranged.

Some kind friend has sent us an extended account of the meeting of the Horticultural Society at Aurora, N. Y., from which the introduction has been extracted. Many others contributed freely, as indeed they must have felt obliged to do with David Thomas as their President and leader, what

they could not perform in the way of horticultural effort?

The reports of the committees evince great attention to horticulture; and among other things, the prominent position assigned to woman by the chivalric sons of the Empire State—since two of the four bodies, that on flowers and that on shrubs and roses, were composed entirely of females—while the vegetables and the fruits had their excellence tested by committees of men. They who judged the fruits must be allowed to speak for themselves:

The committee will, in conclusion, add, that they were highly gratified with the display of fruits and flowers exhibited, and greatly pleased with the evident satisfaction and gratification of the multitude assembled upon the occasion, and hope the Society, will continue prospering and to prosper, that other kindred societies will grow up in other parts of our fertile country—that each may derive benefit from the emulation and example of the other—that much strife may arise between them, unaccompanied, however, with any, the least envy or ill-feeling—that each society, and every individual member, may strive, by taste in selection, and assiduity in cultivation, to excel the other in procuring and producing, in maturing and perfecting, the most beautiful and fragrant of the flowers, and the most delicious and perfect of the fruits of the earth, “and that each may be perfect after its kind.” That they may thus beautify and adorn the page of the book of Nature that is open before them, and add something to the wealth of her granaries, “that others may eat thereof, and be refreshed thereby.” And having thus done their part faithfully, trust in him who clothes the flowers with beauty, and infuses into them all their fragrance, who imparts to the fruits all their richness and excellence, to give the increase to that which they have so faithfully planted and so carefully cultivated.

DAVID WRIGHT,
HENRY H. BOSTWICK,
ELIAS ROGERS,
WILLIAM SCOTT,
Committee.

THE AMERICAN WINE-GROWERS' ASSOCIATION.

HELD its regular meeting on Saturday, September 6, at Latonia, Ky., the residence of the President, Dr. Mosher. After exhibiting his vineyard, and showing his many varieties of grapes from Texas and elsewhere, growing beside the Catawba, which lost nothing by the comparison, the doctor introduced us to a cold collation, where A. H. Ernst, President of the Horticultural Society, presided, and various matters were freely discussed with no little *gusto*.

Samples of Catawba wine were exhibited, to show the difference in quality resulting from different modes of treatment. Some were made from the bunches pressed whole, other samples had been prepared with the stemming machine of the Messrs. Corneau, of Latonia. The latter was preferred by most of the members, though, strange to say, some continued to think there was most astringency in the wine from which the stems had been removed.

Both samples were new, 1850, and were presented to afford a comparison as to the *stemming process*. There was some diversity of opinion upon the utility of the thing. Some quoted Dufour as to the propriety of retaining the tannin from the stems. Mr. Buchanan stated, that finding the stems of his grapes more juicy than usual last year, he had stemmed about half of his grapes. The Messrs. Corneau think it is a great improvement. It was observed that the wine made *with the stems* would improve the most with age. The wine scale indicated a greater amount of alcohol in the wine that was from the stemmed grapes, and it was generally considered more delicate.

Among the samples exhibited, was one of vintage 1849, which had been racked at the end of February following into two casks, one of which was still in the wood, and one

had been bottled. The one left in the wood was found to be less ripe than that in glass and to possess less alcoholic strength. The opinion was advanced that when wine was once ready for bottling it would ripen faster on the cork than in the cask. Another specimen was produced as a test to the Society, who manifested their tact by detecting that it was an old wine, and also that it had been bottled before it was ready to leave the cask, —a very common error. Some even named the year in which it had been made. Dr. Mosher complimented the Society for their judgment; and confirmed the decision by saying that it was 1848, and that it had been bottled the following Spring which, he believed quite too soon. All agreed with Mr. Reh fuss that it should be quite cellar-ripe before bottling.

Mr. Reh fuss presented a bottle of wine made from grapes grown in Kentucky, on the next place to Latonia, vintage of 1848 bottled only last week; it was considered very fine, and called *nice*. It had been fined with isinglass, and will improve on the cork.

Dr. Mosher also exhibited a sample that was admired by some; it had received half an ounce of Catawba brandy to the bottle, when corked, at 18 months old. Many admired it, but it was suggested that less of the brandy would have been better; it was said not to have been a strong brandy; of course this wine was the strongest sample shown.

A bottle of last year's wine, from Mr. Sleath's vineyard, on Boldface, was very much admired by the members; it was considered to have a very *clean* taste, and, like the older wines presented by Mr. Reh fuss, was found to leave the tongue free from any unpleasant smack.

Reports from the committee on vineyards, appointed at last meeting, were made, in

part, and the committee was directed to continue its labors, and the reports in full may be expected at the next meeting. It appears that the crop, though good in quality, will be short in quantity, not equalling one third.

Mr. Buchanan moved a vote of thanks to the President, for his very agreeable mode of entertaining the association—carried by ac-

clamation; after which, the vineyards of Mr. Jones, and that of the Messrs. Corneau, were visited and admired.

The association adjourned in good season, and returned to their homes, thinking this a very interesting meeting, at which, by means of social converse and observation, some of the members, at least, had acquired valuable information. JNO. A. WARDER, Sec'y.

THE AUGUSTA ROSE.

It was a source of great regret that this celebrated novelty was not presented to the public gaze at the New York State Fair at Rochester. It was one of the attractions I anxiously looked for, though in vain, among the extensive collections of the Messrs. Thorp, Smith, Hanchett & Co., of Syracuse, whose acquaintance I was happy to have the opportunity of making at the Fair, and whose splendid collections of new and standard fruits and rare evergreens were objects of great attraction.

Though unable to visit their extensive nurseries and houses at Syracuse, I understand they have more than one hundred acres closely planted, and that their large green-houses and ornamental department are under the immediate superintendence of Mr. A. Fahnestock, for many years a resident in Lancaster, Ohio.

For want of personal information upon the

subject the following notice is taken from a late number of Mr. Downing's Horticulturist:

Some of our readers may remember an account of a new yellow climbing rose, a seedling, described under this name in vol. 4, p. 147. The rose as we understand, has not yet been sent out, but the whole stock of it is in the possession of Messrs. Thorp, Smith, Hanchett & Co., of Syracuse, N. Y.

We have just received by express from these nurserymen, a small box containing a branch of the Augusta Rose in good order, and are glad to bear testimony (as far as a single cluster of cut flowers will allow us,) to the beauty of this new variety. The flowers are a fine yellow, deeper than Cloth of Gold, and deliciously fragrant. We learn from those who have seen this new American seedling growing, that it is a fine vigorous climber, with an ever blooming habit—and have no doubt that it will prove a great acquisition. Messrs. T., S., H. & Co., write us, that "mere cuttings stuck in March and April—some of them not more than six inches high, are now in full bloom. Every new shoot blooms freely."

THE AMERICAN POMOLOGIST.

This appears to be a continuation of a work commenced some years since. It is a handsome quarto volume designed by A. HOFFY, of Philadelphia, to perpetuate a knowledge of our native fruits, many of which are taking the first rank among the superior varieties.

The publisher in announcing to the world that he has secured the services of that sterling pomologist, Dr. Wm. D. Brincklé, has good reason to plume himself upon the acquisition, and very justly deems it a source of pride and triumph, that he can refer to his many contributions to the advancement of

Horticulture, as well as to his scrupulous observance of truth and impartiality; all which will be heartily conceded by those who know him best.

Mr. Hoffs, therefore, is fully able to promise a *standard work of the strictest reliability*. It is to be published about every three months, and each number is to contain "ten illustrations, true to nature." They are well lithographed and colored with great care.

The Editor in his preface alludes to the frequent disappointment which has so often attended the cultivation of foreign fruits, even when they have brought the highest recommendations with them from abroad, and with true patriotic zeal, he directs our attention to the importance of selecting the best of our native varieties of fruits, as likely to be better adapted to our soil and climate. No one is better qualified to decide upon the merits of our fruits, nor can any one be a more enthusiastic investigator of the history and properties of good varieties than Dr. B.; nor can his efforts in this department be excelled, unless it be by his untiring experiments in producing new seedlings of many kinds—in which field of labor too his experiments have been rewarded with a fair proportion of success.

The engravings appear to be real portraits of *average* specimens, and not the exaggerated caricatures we sometimes behold in the portfolios of those enterprising and industrious distributors of strange looking plants from foreign parts, that so frequently descend upon us, with large collections of trees, to match their pictures, but who always take care to vanish long before the fruit appears to prove the truth or falsity of the labels.

The illustrations of the first number are, the *Brandywine* Pear, which is well placed first by the Dr., who has done so much to make the banks of that stream, and indeed the whole State of Delaware, famous for

pears, by planting there the largest collection of this delicious kind of fruit

Next, the *Moyamensing*, which originated in the garden of J. B. Smith, of Philadelphia. The original tree is 70 or 80 years old and a constant bearer.

The *Petre* is figured as a noble Pear which was raised by the venerable Jno. Bartram, from a seed sent him by Lady Petre, in 1735.

The *Pennsylvania* is another seedling which originated in Moyamensing some 50 years ago. It is still standing in the garden of J. B. Smith. This is a delicious fruit, and should be propagated from a correct source, as a different fruit has been cultivated in some parts of the west.

The *Republican* apple, *Eliza* peach and the *Burlington* apricot, are next exhibited in fine colors—the peach, apparently tinted above nature, at least it so strikes those who have not seen the fruit. *Wendell's Mottled Bissarrean*, is a beautiful cherry, of a brilliant deep crimson. To complete the number of illustrations, the Dr. has modestly placed at the end of the list two of his own seedling Raspberries—the *Col. Wilder*, a yellowish white, and the *Cushing*, a crimson, are beautiful fruits. The first is from the *Fastoff*, and the latter from the *New Double Bearing*, and resembles it in producing an autumnal crop of fruit.

This is decidedly a valuable contribution to Horticultural science, and it is most sincerely hoped that the voluntary labors of Dr. Brincklé, with the excellent illustrations and concise but admirable descriptions, will render the "*AMERICAN POMOLOGIST*" so attractive as to reward the publisher in such a substantial manner, so as to make the work permanent in its character.

The price is two dollars per number, or eight dollar per annum. Subscriptions are solicited by Geo. G. Jones, Cincinnati, Ohio.

THE OHIO STATE-FAIR.

THIS was the second effort of our agricultural State to hold a grand exhibition of her productions, and of the skill of her manufacturing citizens; it was decidedly an improvement upon the show of last year, which was a first effort: the managers have, however, much yet to learn, and it is not a fair comparison to array this with the more experienced State Society of New York, which has held eleven of these great exhibitions.

The grounds of the Fair were admirably selected, of ample size, and well arranged. The tents and buildings occupied a rising mound of irregular shape near the center, and were thus well displayed.

Floral Hall, a large tent, very naturally attracted my attention, and shall receive the notice to which its interests are entitled. The display of fruits was much larger than any one had anticipated. The Ohio fruits were mostly from the favored "Lake region," which had escaped partially from the frosts of May. Messrs. Elliott, Kirtland, McIntosh, Coit, and others, from Cleveland, our kind friends Chas. Carpenter and Addison Kelley, of Kelley's Isle, away out in Lake Erie, and the famous Penfielders, from Lorain county, Jackson and others, from Huron and other counties, contributed large quantities of fine fruits of various kinds.—Grapes were also shown from Chillicothe, by N. W. Thatcher, from Columbus by the brothers Jacobs, who are making wine there, and a display from Cincinnati, especially those from W. Heaver, choice specimens of the finest foreign varieties grown under glass—which compared very favorably with those brought from N. Y., grown by Messrs. Bissell and Hooker, in whose behalf it should be added, however, that their vines had been severely stripped for the Rochester Fair, and to supply the magnificent fete at Corinthian Hall, before the basket was so

liberally filled for the decoration of the Floral Hall at Columbus. Among those exhibited by Mr. Heaver, the enormous bunch of the Palestine grape attracted much attention on account of its size.

The peaches from Girty and Elliott, and those from Sandusky, rivalled even those from Kelley's Isle, so famous also for its grapes and other fruits as to have been styled the Paradise of fruit growers.

The vegetable department was very well represented by abundant specimens of every variety, and of great excellence—doing much credit to the fertile soil and skillful management of the cultivators. Here were potatoes that would excite the jealousy of the Neshannock vale—onions that would vie with the best of Wethersfield, and cabbages that might be shown at Kinderhook—tomatoes that were most beautiful, and worthy of their cognomen Pomme d'amour—squashes and pumpkins that awaited a New England Thanksgiving day—sweet potatoes that exceeded in smoothness and equalled in size those of Louisiana, and melons that rivalled those of New Jersey.

The Floral department called out most of the green-house plants of the Columbus amateurs, among whom Dr. F. Carter presented a choice collection. In the "professional list," Wm. Heaver of Cincinnati, bore off the palm with his beautiful and well grown plants. The large stands of cut flowers, Dahlias, Phloxes, Verbenas and Roses from McIntosh & Co., of Cleveland, far exceeded in size and beauty all others shown. These were some of his roses that claimed especial notice, Madame Préal, Duchesse de Nemours, Wm. Jesse, La Reine, Marquise Boccella, Pourpre de Tyr., Prince Albert, Auberon, Souvenir de la Malmaison, and Devoniensies.

Of his Phloxes, Princess Marianne, Alba

Kermosine, Corymbiflora Alba, Apollo, Rosea Superba, and Corymbosa, were considered worthy of particular notice.

Among his great assortment of Dahlias the following were remarkably fine: Striata Perfecta, Elizabeth, Walter Hilson, Grant Thorburn, Star, Louisa, Rainbow, Lord Bathurst, Florence Dombey, Madame Zahler, Yellow Standard, Gaiety, Miss Vyse, Eillet Parfait, Duke of Wellington, Queen of Autumn, Standard of Perfection, Gem, Miss Stevens, Lady of the Lake, and others.

He also presented some good seedlings, to one of which, Governor Wood, a handsome scarlet, the prize was awarded.

Bouquets, large and small, decorated the pyramids, temples, and other designs that had been erected with much taste by Dr. Jones and his colleagues, the gentlemen and ladies of the Columbus Horticultural Society, under whose fostering care this whole department had been placed, and to whom the State Board must feel under great obligations.

METEOROLOGICAL TABLE.

CINCINNATI, AUGUST, 1851.

THERMOMETER			WEATHER.					Clear days in the month 14 Variable (sun visible at times) 17 Cloudy (sun not visible)..... 0	
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.	RAIN.	WINDS, ETC.		
1	64	83	clear	clear	clear		1	Calm, light S W.	
2	63	86	do	do	do		2	Light N, var and S W. (Sun 124°)	
3	63	85	var, rain	do	rain	.60	3	Calm, light S, light E.	
4	71	79	cloudy	var	var		4	Brisk S and W; light W; calm at eve.	
5	67	83	clear	clear	clear		5	Light W; calm at eve.	
6	67	90	do	do	do		6	Calm; light S W and W.	
7	75	88	cl'y, rain	do	var	.10	7	Do; light W and N W; calm.	
8	74	94	var	do	cler, rain	.15	8	Do; light S W; squall near 10 minutes; calm. Thunder.	
9	75	92	do	do	var		9	Light S W; brisk S W and W; calm at eve.	
10	68	88	clear	do	rain	.45	10	Do do and E.	
11	73	80	rain	cloudy	var	.30	11	Calm; light S W.	
12	71	83	fog, rain	var	clear	.15	12	Do; light E and N E; calm.	
13	72	90	do, clear	clear	do		13	Do; light S; calm.	
14	76	81	rain	do	do	.05	14	Do; light N.	
15	67	85	clear	do	do		15	Light N; calm at eve.	
16	66	90	do	do	do		16	Do; S E. Catawba grapes ripening.	
17	78	90	cloudy	do	var, rain	.65	17	Calm; light N; light S; brisk S; calm. Very severe thunder storm and squall for 15 minutes.	
18	71	74	do	cloudy	var		18	Light N.	
19	64	75	cl'y, rain	var	clear	.10	19	Do E.	
20	64	80	clear	do	do		20	Do N.	
21	63	81	var	do	var		21	Do S.	
22	72	82	cloudy	clear	clear		22	Calm; light S W; calm.	
23	65	86	fog, clear	do	do		23	Light S W and W.	
24	65	89	clear	do	do		24	Do E. (Sun 123°)	
25	65	89	do	do	do		25	Do S W and W.	
26	67	80	cloudy	do	do		26	Brisk N and N E.	
27	58	81	clear	do	do		27	Light N E and E.	
28	62	84	do	do	do		28	Do E and S.	
29	63	88	do	do	do		29	Do S.	
30	67	88	do	do	do		30	Calm; light S W; calm at eve.	
31	71	88	var	do	do		31	Do; do; calm.	
Total rain..... Inches, 2 55							REMARKS.—The thunder storm, on the afternoon of the 17th, was the severest, probably, that this City has ever experienced; four houses in the City and suburbs were struck by the lightning, with but trifling damage, and no lives lost. The squall, though severe, was of short duration, and does not appear to have injured any of the shade trees in the streets. The quantity of rain for the month is below the usual average, and up to the 31st, from the 31st Dec. ult., but 23.25 inches have fallen—being about two thirds the usual quantity.		
Mean temperature of the mon.....76.47°							JOHN LEA.		
Do do August, 1850.....78.26									
Do do do 1849.....75.69									
Do do do 1848.....74.60									
Do do do 1847.....70.54									
Do do do 1846.....76.65									
Do do do 1845.....76.73									
Highest temp in the month,.....92°									
Lowest do do .....58									
Range.....34									

JOHN LEA.



Vol. II.

NOVEMBER, 1851.

No. 2.

SENATOR DOUGLASS'S SPEECH AT THE NEW YORK STATE FAIR.

THE *addresses* constitute a very important feature of the modern Agricultural and Horticultural Fairs and Exhibitions.

These are not generally merely political speeches, made for effect at the ballot-box, nor for mere glorification of the speakers—the people require more than this; they want, with pleasing eloquence, substantial mental food and useful information, that may be safely relied upon. Our public speakers are becoming aware of this, and are producing, more and more, the pabulum desired by their audiences. We have had several addresses presented to the people within a few weeks, which are of this character, upon some of which a few words of comment might be acceptable; and the experiment shall be tried, beginning with that delivered at the New York State Fair.

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On Thursday, the 19th, agreeably to appointment, Senator Stephen A. Douglass, from Illinois, addressed the society in a speech of perhaps two hours, in which he took a rapid glance at all the leading agricultural and planting interests of our extended country, intermingled with his views of policy for the General Government which, of course corresponded with those taken by the section

of politicians with which he is associated, but somewhat different from those in which I was nurtured, upon the *farm*, and the belief is not yet shaken, that a good market near home for all the varied products of the soil, is infinitely preferable to any that could be found on the other side of the globe. Indeed, it is doubtful whether any one can form correct notions upon this topic, if he be not familiar with the true theory of judicious agriculture, which requires an adequate return *to the soil* of an equivalent for our constant drafts upon it, just as certainly as the money bank of deposit must have accessions from our coffers, if we expect it to honor our constantly repeated drafts upon its vaults. Mother earth is truly the best bank, but she is a bank whose laws of draft and deposit must and will be respected. No soil, unaided, will continue, indefinitely, to produce any one crop to be sold and consumed at a distance; but a judicious system of farming, with a due admixture of *cattle crops* to be fed on the ground, and which thus return to it a supply of nutriment, will enable us to *add* to the fertility of the soil, instead of diminishing it as we inevitably must when we ship away cotton, tobacco and wheat for a series of years, making no return to the land.

But to return to the address. Mr. Douglass set forth in its true light the immense value of the agricultural interests of our country, and endeavored to impress the farmers with the incalculable value of an application of scientific knowledge to the processes of the Farm. Chemistry, Geology, and especially Mechanics, have contributed in a great degree to the success of the art, and the most extended system of internal improvements has been found necessary, he says truly, to furnish a means of transportation for its productions.

Our agricultural products, owing to the vast extent of our territory, and the great differences of soil and climate, are so varied as to furnish abundant exchanges for the domestic trade between the different States of the Union. They furnish in themselves the materials of a very extensive internal commerce, employ, to a large extent, our coasting tonnage, and secure constant employment to our Steamboats and Railroads. Planting and farming are the mutual allies of each other, as are, indeed, all branches of agricultural industry, notwithstanding the many prejudices which, in this respect, may be entertained in various sections of the country. They take a narrow view of political economy, who can see but rival interests growing out of the different productions of the same country; and they are worse than bigoted who, in consequence of it, indulge in unworthy jealousies or hostile sentiments towards brethren of the same family. You can not, by legitimate means, benefit any one branch of industry of a great country, without indirectly benefitting all the rest; but when, as in the case before us, one interest is dependent on the other—when the producer of the one article is the best and often the only consumer of the other, who is so rash as to assert that the prosperity of the one works the injury of the other? But it is not my purpose, on the present occasion, further to pursue this train of thought. My object is not to make proselytes for a particular theory; but simply to show the necessary connection and intimate relationship of all the branches of the same species of industry, and their harmonious co-operation in

promoting the wealth, happiness and power of a great people. The free international exchanges of commodities, so eagerly sought for, as the great commercial desideratum of the different nations of Europe, exists already, by the simple operation of our federal constitution, between the different States of Europe are less varied than those of the different geographical divisions of our common country. The domestic exchanges of every country naturally constitute the great bulk of its entire commerce, but in none—perhaps not even in China—is so large a portion of them furnished exclusively by the products of the soil, as in our own.

WILD RICE.

Of the many varying topics upon which he has touched, I have only quoted a few, and among them, those especially which possess a peculiar interest from their connection with the cultivation of the soil. The Senator should know, however, that the wild rice of the North is very different from that of the East.

It is moreover confined to a few localities and limited in quantity, though constituting a very valuable crop. Heretofore, rice has only been raised in southern latitudes; but within a few years—since the territory of Minnesota has been thrown open to settlers—it has been ascertained that the innumerable small lakes and swamps, which dot the map of that section of country, upon the head waters of the Mississippi, contain a luxuriant and spontaneous growth of wild rice, which is well adapted to culinary purposes. Is it not then, a subject worthy of investigation, whether this new species of rice, a native of the North and accustomed to a northern climate, may not be produced in the swamps and marshes which now disfigure our best agricultural regions, and remain a source of disease and death to their inhabitants? I merely throw out these hints to direct your attention to the subject; not knowing whether others may not have preceded me. I leave it to your better knowledge, and to your practical qualifications as farmers, to make the necessary experiments; believing that in agriculture, as in other sciences and occupations, experience alone is the proper test of all discoveries and improvements.

SILK AND TEA.

Heretofore in this country the silk business has unfortunately been too much a matter of speculation in mulberry trees, but it will one day take its true rank among the legitimate objects of culture.

I would fain say a few words on the culture of Mulberries, in connection with the raising of the silk-worm, and the manufacture of silk. I am aware that the experiments heretofore made have usually proved unsuccessful; but the enterprise resembled more a mercantile speculation than a fair trial by practical men. I am loth to believe that within the wide range of our Northern and Southern latitudes, there should not be a spot favorable to the cultivation of the silk-worm. Silk-worms, and the peculiar species of mulberry upon which they live, were first introduced into Asia Minor from China; and the experiment having succeeded in Greece, in Turkey, in France, in Italy, in Spain, and in Portugal, is it not reasonable to suppose that they would also thrive in many portions of our own country, if the attention and care were bestowed upon them which are the conditions of their growth?

Experiments have lately been made in South Carolina in the cultivation of the Chinese tea-plant, and if the accounts I have seen are to be relied upon, have entirely succeeded. Why then should not silk, an article much less delicate than tea, and which has already succeeded in so many different climes, be susceptible also of profitable cultivation in the United States? A large portion of our imports from Europe, consists of manufactured silks, and if we could succeed in domesticating that species of industry, a degree of stability would be imparted to our foreign commercial policy, which would serve to prevent the confounding of political economy with partizan politics.

WINE.

Hear what he says of the production of wine, and its effects upon the temperance of a nation. Do not, however, hastily adopt his views with regard to the improveability of a wild grape by culture and manure. The seedlings may or may not be superior to the

wilding, the natural character of which will ever remain what it was originally created.

My remarks on the subject of silk, apply, perhaps, with equal force, to the cultivation of the vine. The vine is a native of Asia, but has attained its highest perfection in Europe and Africa. While there is scarcely a species of Asiatic wine known to commerce, some of the highest priced wines in Europe are manufactured from vineyards in latitude 48 and 50. Careful tending and manuring, and the treatment of the wine in the cask and in the cellar, seem to have done everything. We have as many varieties of the grape as any part of the world, indigenous to our own country, and growing wild luxuriantly in wood and prairie. The greater part of them, however, remain uncultivated, without the least value being attached to them by our farmers. Yet, strange to say, almost every experiment which has been made with our indigenous grape, has succeeded. Good wines, far superior in quality to the ordinary hocks and clarets imported into this country, are now made from pure indigenous grape, in many portions of Pennsylvania, Ohio, Kentucky, Indiana, Illinois, Missouri, and doubtless in other States of the Union; while it is well known that wine has long been a staple article of production in the valley of the Rio Grande and the southern portion of California. The *Catawba Grape* has shown itself admirably adapted to the manufacture of champagne, while the lighter sorts of it furnish an excellent article for the use of the table. I have been informed that natives of Europe, now adopted citizens of the United States, are willing to pay a higher price for them than for the usual qualities of French or German wines to which they are accustomed.

A very fair Ladies' Wine is produced in North Carolina, from an indigenous grape, called Scuppernong, peculiar to that State.

Similar experiments have been made in other States, and it would, indeed, seem as if the indigenous American grape was infinite in its varieties, and its culture better adapted to the soil and climate of this country than that of any other kinds of grape imported either from Europe, Africa, or the Canary Islands. In view of these facts it is certainly no wild conjecture to suppose that the United States will, in a very short time, pro-

duce good wine so cheap and in such abundance, as to render it a common and daily beverage. Such a result is not to be deprecated on the part of those most scrupulous on the subject of ardent spirits, for it is a well established fact, verified by the observation of every day, that the population of wine-growing countries is noted for sobriety and temperance. The most sober people of the old world, are in the wine growing countries of southern Europe, where the article, like water, is placed on every table, free of cost, but an extra charge made for coffee and a very exorbitant one for tea. They scarcely ever indulge in it to excess, while in northern Russia, where ardent spirits are used as substitutes for wines, intoxication is the prevailing vice; the example having been set by no less illustrious a person than Peter the Great.

GRAIN.

With regard to the wheat trade, I can not coincide with his views, believing that Europe will purchase of us only when she can not furnish her own supplies; it is too uncertain a market to depend upon. Still less can we count upon a sale of Indian corn, which is essentially an American product, and must be chiefly consumed at home.

Indian corn is, no doubt, an indigenous plant of North and South America; having been cultivated by the Indians many centuries before the discovery of this continent. Antiquarian researches and architectural ruins show that Indian corn must have been grown and held in high esteem, as the chief article of food, by the Aztecs, and this supposition becomes the more probable, as the principal other grains now cultivated in America have been since introduced from Europe. On this continent it now constitutes a chief article of food for man, and the animals subject to his dominion and an important article of export to Europe, although many parts of Southern Europe have been found well adapted to its growth. It recommends itself to the great body of consumers by its nutritious qualities, far exceeding those of other substitutes for wheat and rye, now in use among the laboring classes of Europe, and by the great variety of forms in which it may be prepared for food. French chemists assert

that two cents' worth of Indian corn will go further in sustaining animal life, than ten cents' worth of wheat, rye or barley. There is no doubt that its consumption is increasing everywhere, and that its production, in this country, on the largest scale, will abundantly reward the farmer. Indian corn will, in due time, not only partially supplant the potato, (which is now an uncertain crop in Europe,) but also compete successfully with the more valuable grains and breadstuffs.

TIMBER.

The closing topic, Timber and its cultivation, are very well worthy of consideration, and should be seriously read; especially in the prairie countries, and where the ax has made sad slaughter of the primeval forests. Some Ohio Agricultural Societies, are wisely giving premiums for cultivated timber trees.

I would now say a few words on the growth of Timber, a subject much neglected by our countrymen.

Yet timber is one of the most valuable productions of the soil, and an indispensable requisite to improvement and civilization of man. No country on earth, is, in this respect, more blameless than our's. None can boast of such a variety of forest trees, adapted to the various uses of farming, the mechanic arts, architecture and ship building. In no other country do we find such magnificent shade trees, such extensive and superb primeval forests, and in no part of the world is the reproductive powers of the soil less exhausted than in our own. Yet, with all these incalculable advantages, and with our unbounded coal fields, the want of fire-wood is already felt in some districts which like the prairies of the West, are naturally destitute of timber, or in which locomotives and steamboats are consuming the article faster than it can be produced in the ordinary course of nature. There is also reason to believe that the extreme desire of pressing civilization forward, and of fertilizing the wilderness in the shortest time, induces many a hardy pioneer of the West to enter somewhat enthusiastically on the "extermination" of our woods, when considerations not merely poetical, but economical and practical, would in more than one instance call out to him, "Woodman, spare that tree!"

Trees are not merely useful and ornamental, but also by their mere existence—by the breathing of oxygen—eminently conducive to health. They are the companions of man, as much so as some of the domestic animals, and have, as such, acquired a certain right to his protection. Many localities which I could name, especially near the sea coast, have been completely shorn of timber; and experience has shown that a forest once entirely cut down, will not grow up again and reproduce the same kinds of timber. Much inconvenience is now felt in consequence, and that evil is progressive, threatening the comfort and interests of farmers, mechanics, and all classes engaged in industrial pursuits.

In most countries of Europe, the preservation of forests, by only partially cutting

down the timber, and selecting for that purpose only those trees, the removal of which facilitates the growth of the young trees, by which means the same species of timber can be reproduced almost *ad infinitum*, without any perceptible deterioration in quality, is reduced to a science, taught in Academies and Colleges.

And though we may not, in this country, feel the necessity of husbanding our almost countless resources of the forest, yet more attention than has hitherto been paid to the subject, is certainly due to it. It is to such societies as yours, I submit this suggestion. It is to your zeal, wisdom and experience that the country may confidently look for the prevention of these evils.

A HORTICULTURAL DISCUSSION

Was held on Wednesday and Thursday evenings, September 17 and 18, at the Council Chamber in Rochester, where many of the most prominent pomologists and cultivators had assembled to exchange thoughts, and express their views upon Horticultural topics.

On motion, Col. B. Hodge, of Buffalo, was called to the chair, and T. G. Yeomans, of Walworth, appointed Secretary. The object of the meeting, having been set forth by J. W. Bissell, the Chairman appointed J. J. Thomas, of Macedon, P. Barry, of Rochester, and J. A. Warder, of Cincinnati, Ohio, a committee to bring forward fruits for discussion. After retiring a few minutes the committee returned and reported progress with the following names, the merits of which were then discussed: The Hawley, Northern Spy, Wagener, Norton's Melon, and Early Joe.

The *Hawley Apple* was at once taken up for discussion:

Mr. L. F. ALLEN, of Black Rock, said he did not fully understand the object of these meetings, but it appeared to him that the end should be to determine something for the

government of fruit growers, in relation to soils as well as the species of fruits. His reading on the subject had been considerable, but he had been unable to form definite conclusions as to soils, localities etc., best for particular fruits. If in the discussion of these things each would state his own experience as to soils, etc., it would better satisfy people who are engaged in cultivating fruit and be more profitable.

J. W. Bissell moved that the Hawley is a first-class apple, but should be grown on heavy soil.

Mr. Barry thought there had not been sufficient evidence on this point. He had seen very fine crops of it on light soil. Two trees, on different soil, might present different results. We need a variety and a good many facts before settling upon the soil requisite for its growth.

Mr. Frost, of Chemung, said the apple had been grown near Binghamton, upon an alluvial or light gravelly soil, and it was highly esteemed there. The crops were frequently heavy.

The resolution of Mr. Bissell was amended on motion of Mr. Thomas, so as to read that "the Hawley apple belongs in the first-class, but we have not sufficient experience on the subject to state what kind of soil is the best suited to it." Agreed to.

Mr. Hodge, of Buffalo, the subject of

growing the "*Northern Spy*" apple being up, said that he was sorry to hear it remarked that this apple would prove a failure. In the vicinity of Buffalo, upon a rich soil, and with good cultivation, it had succeeded admirably. There were trees there 15 years old, that were bearing well.

Mr. L. F. Allen said he had at one time gone into the raising of the *Northern Spy* pretty extensively. He put the trees into a stiff soil, part clay and gravel. They disappointed him in not bearing early. The other day, however, he was surprised to see the fine growth the *Spy* had already attained, in comparison with other fruit. He intended to go into the cultivation of them pretty largely. The tree is apt to get a bushy head.—Last spring he thinned them out, and found great benefit from it. The trees that bear are spreading out, and will have as good a head as the russet. If people would cultivate their orchards, as well as they do their potatoes, they would find the *Northern Spy* one of the best apples grown. They are excellent market apples, and every way desirable. It was his present intention to devote three-quarters of his space to this fruit.

Mr. Langworthy thought there was still a possibility of our being deceived as to the *Northern Spy*. The experience here had been with young trees. They had been introduced here only within a few years, but in Bloomfield, he had seen some quite inferior fruit of this kind. They had no distinctive flavor, and their chief excellence was their fair size, freedom from blotch and warts, and their long-keeping.

Mr. Allen asked if the orchards in Bloomfield were well taken care of.

Mr. Bissell replied that the trees were old, and overgrown with suckers. The reason why the fruit did not succeed was very apparent. The only wonder was that there should be any fruit on them at all. In Mendon there were trees some 15 years old, that bear uniformly well.

Mr. Barry sustained Mr. Bissell's statements. As to the remark that the apple had no distinctive flavor, he differed with Mr. L. It could readily be recognized among others. The flavor and perfume he thought decidedly distinctive.

Mr. Hooker said the test of an apple should be applied in its season. He thought

there was no apple that suited more generally in its season.

Mr. Barry concurred in the last remark.—The *Spy* should be eaten when all other apples had passed out of season. He had seen them in high condition on the 4th of July.

Mr. Smith, of Macedon, thought that it would suffer in comparison with the Baldwin.

Mr. Allen regarded it as no objection that the *Spy* was tardy in bearing. He considered it a fruit of very high flavor, and related an incident to show that such was the case. The perfume of the apple was very pungent, a single apple sometimes perfuming a large room with a delightful scent. He moved, as the sense of the meeting, that the *Northern Spy* be regarded a fruit of the first quality, of excellent flavor, and of high good keeping qualities, and that it be recommended for general cultivation.

Mr. Langworthy said the perfume of the *Spy* was wholly in the skin and had nothing to do with the flavor of the apple.

Mr. Allen's motion was agreed to without dissent.

The *Wagener Apple* was next taken up.

Mr. Barry said this apple had obtained a high reputation throughout the country, and orchardists and nurserymen had given their attention to its cultivation. He had been to Penn Yan to see the old tree, to ascertain its qualities, and he had found some fine specimens. As compared with the *Spy*, *Swaar* or *Spitzenberg*, he regarded it as inferior in some respects. It keeps until about the first of May. The tree bears well.

Mr. Thomas had seen some fine specimens, but he wished further information in regard to it before deciding as to its real qualities.

Mr. Allen had heard it remarked that apples of high red color generally found a better sale than the yellow or green. How far this should govern in cultivation might be considered an important question. For his own part, he should regret to grow a poor apple merely because it was red.

Mr. Bissell said it was a fact that the color had a great deal to do with the sale of fruit. Those who grow fruit for sale, in this section, were perfectly aware of this. The same was observed in relation to peaches.—Crawfords would sell better than Kensingtons, although not half as good.

Mr. Thomas remarked that there is a

great deal of fruit grown by people for their own consumption,—those who live back in the country, as he did—and such growers looked for the best, without regard to appearance. He was not ready to take Rochester and its neighborhood as a criterion.

Mr. Frost made some remarks in favor of the Wagener apple. He had seen it growing finely, yielding uniformly good fruit. It was a long keeper. He had tested it in comparison with the Spy at the meeting in Albany, and had there given the preference to the Wagener, in respect to flavor and fineness of grain. The time would come, he believed, when it would be regarded with general favor.

Mr. Bissell thought the test not a fair one because the Spy was not matured to the same extent as the Wagener.

Mr. Langworthy inquired how long the Wagener retained its qualities after it came to its full maturity? This he regarded as a question of some importance.

Mr. Frost said the committee of the annual meeting had put it down as fit for use from January to May. It keeps in flavor a long time.

Mr. Allen gave a history of the introduction of this apple. The committee on fruits had at one time given it the first premium, and he believed now that that decision was correct. He would not perhaps call it a first rate apple, but a good apple, of high quality in its season. The knowledge of it was not yet sufficient to admit of a more decided opinion.

Mr. Smith, of Syracuse, inquired why the fruit was not fit to be recommended for cultivation, if it was acknowledged to be a first rate one in its season, and a good bearer?

Mr. Allen explained. Specimens of the apple had been exhibited possessing first rate qualities, but we cannot decide that it would produce as well everywhere. The Seek-no-further was an instance to show that fruit does not excel in all kinds of soil.

Mr. Barry remarked that it was quite important, in all discussions of this kind, to observe caution in coming to decisions in regard to fruit. Many persons had been misled by the reports of Societies, and found themselves greatly disappointed. The great fault prevalent was the disposition to take up new specimens upon slight experience.

Mr. Bateham, of Ohio, requested, in be-

half of cultivators in his State, that great caution should be observed by pomological conventions and societies in this State, in recommending fruit for general cultivation. It was a difficult matter to decide on the question of soils, climate, etc., in different localities. Fruit growing well in one place is worthless in others. Such was strikingly the case in Ohio. No general rules are applicable to the cultivation of fruit in that State.

Mr. J. J. Thomas moved to amend the suggestion of Mr. Allen, by declaring the Wagener to be a good apple, a fine bearer, and worthy of extensive trial. This was agreed to.

The *Norton's Melon* was next taken up.

Mr. Barry regarded it as the best of all apples. He had taken specimens to Europe, and on all hands it had been received with great favor. Many who grew fruit extensively said they did not know that an apple of such tenderness and fine texture existed. The tree is a poor grower but a good bearer. It keeps well till the first of May, and may be eaten all winter. As to the soil best adapted for it, he could not say; but considered it to be best grown upon a substantial clay loam.

Mr. Smith, of Macedon, from some considerable acquaintance with it, was prepared to indorse all Mr. Barry had said. Its great beauty and other desirable qualities should give it a place in every orchard. It is so delicate, however, that it is apt to be injured in gathering, so as to prevent its long keeping.

Mr. Allen thought it might be recommended as a good apple for family use, as far as tested, to which Mr. Barry assented.

The subject was passed over, and the *Early Joe* taken up.

Mr. Langworthy's opinion of this apple was that it was one of the first rate September apples. It ripens in the peach season, and was therefore not valuable. It is a fair apple in all respects, and a good bearer. Its name came from the incident that for a long time a servant of a gentleman in whose orchard it was originally found, always picked and ate them before his master could get them. For richness and delicacy he regarded it excellent.

Mr. Thomas spoke well of the fruit. In its prime it was very excellent, but it must

be eaten by the chronometer, from the tree. Mr. Biasell recommended every one to have one or two trees of this apple. The Chair regarded it as a *very good* apple, and coincided with what had been said of it.

Mr. Langworthy moved that it be recommended as a good apple for limited cultivation and family use. Agreed to.

The *Norton's Melon* was brought up again, and after some discussion, recommended as a first rate apple as respects flavor and general good qualities, and that it is an excellent fruit for family use.

ADJOURNED MEETING.

The meeting was called to order by appointing Wm. R. Smith, of Macedon, Chairman, and L. Wetherell, Rochester, Secretary.

Subjects for discussion—First: Pear blight.

J. J. Thomas, of Macedon, being called upon, said, that he had not had much experience in the treatment of the disease called Pear blight. The remedy he had applied successfully was the knife—removing the diseased part. He regarded the disease contagious, and believed it was so regarded generally.

A. G. Hooker, of Rochester, next spoke on the subject. He, like Mr. Thomas, applied the knife; and further remarked, that he did not regard the disease as being caused by an insect. The disease spread from the pear trees to the apple trees located near the former. He deemed some varieties of the apple more liable to the disease than others, and so of the pear.

J. J. Thomas also remarked that he did not regard the disease as being caused by insects.

P. Barry remarked that he has had much experience and of a very sad kind. He came to the conclusion at one time that the disease under consideration, was caused by insects, but from very close observation by day and by night, he had been unable to satisfy himself whether it be caused by insects or not. He had lost more trees on sandy than on clay soil. His impression, notwithstanding he had been unable to discover insects, is still that this disease is their work. One strong evidence of this, is, that not only the pear, but the quince, medlar and thorn were alike attacked by the "blight."

The knife, he remarked, was, and is, the best remedy yet known.

Dr. Warder, of Cincinnati, remarked that the disease sometimes attacks the tree near the ground and even below the surface. What avail then will the knife be? The Passe Colmar and Seckel are less liable to the blight than other varieties. He did not believe in the insect theory.

S. H. Ainsworth, of West Bloomfield, said his experience was in harmony with the above remarks.

P. Barry offered the following resolution: *Resolved*, That we look with favor upon the "theory" that the "Pear blight" is the work of an insect—5 ayes; 16 noes.

The next subject discussed: The Curculio.

R. G. Pardee, of Palmyra, remarked that the remedy he had found a successful prevention was the white-washing of the fruit.

A. G. Hooker remarked that jarring the tree with a sheet or canvas spread underneath the tree, was a very effectual remedy.

S. H. Ainsworth's experience was similar. He was careful also to remove all the fruit that falls prematurely.

J. J. Thomas remarked that in jarring the tree, the best way is to saw off a small limb and then strike the end with a hammer in order to loosen the hold of the insects.

Remarks by the President. He regarded the "jarring theory" as being well established. Also, that poultry and pigs were good preventions.

P. Barry remarked in favor of planting plums and other smooth skinned fruits so that pigs and other animals may have access to the trees, so as not to injure them.

Adjourned sine die.

W. R. SMITH, *Pres't.*

L. WETHERELL, *Sec'y.*

REMARKS.

These meetings, in a quiet room, were of the truly useful and improving kind as well as deeply interesting, since they not only afforded many fruit growers from distant points an opportunity of exchanging views for mutual improvement, but also brought them together in a most agreeable social reunion, where the interchange of their information was more satisfactory, than if made amid the bustle of the show grounds.

NORTHWESTERN ASSOCIATION OF FRUIT GROWERS.

BY J. A. KENNICOTT.

THE GROVE, NORTHFIELD, COOK CO., ILL.

October 10, 1851.

DEAR DOCTOR:—I am at home once more. Our Convention of Fruit Growers, at Princeton, Bureau Co., from which I am but now returned, was a much more respectable affair than I had dared to hope for, at this early day of Illinois Fruit Culture.

We had a pleasant and profitable time of it. Delegates from central and northern Illinois came in respectable numbers, and even Wisconsin and Iowa were represented.

The show of fruits was large—much larger than at our Congress at Cincinnati, principally *apples*, of course, though there was a fair sprinkling of *pears* and *grapes*, and some *peaches*, even. By the way, I stopped a day with friend H. L. BRUSH, at Ottawa, on my return. You may remember I mentioned his vineyard of Catawbas in my "Report" to the Congress. Well, I was wrong in one statement. Mr. B. *does* prune his vines in summer; treats them after the mode of your vine dressers. He has a good show of grapes this year, though a very bad season. They are late, but healthy; some black spots on the fruit grown on the bottom, at the base of the bluffs, but none on those grown on the face of the bluffs. The yield is also much larger on the hillside than at its base; in fact, almost a failure below, while above, he has gathered thirty-five bushels from two hundred and fifty vines, trained after the Cincinnati fashion.

Mr. Brush made some wine last year. I have tasted it, and like it, and think it has the body, flavor, and bouquet of your best, though only a year old. Mr. Brush is increasing his vineyard, and is very desirous of attempting the "Sparkling Catawba." I

hope he may succeed, for his enthusiasm and devotion deserve success. Soil and aspect here, very like yours, around Cincinnati, and climate much the same. Say a word, my friend, when you can do so, to encourage this worthy imitator of a Longworth, who, without wealth, is the pioneer in the field culture of the vine, and wine making from the Catawba in northern Illinois.

But to go back to our Convention of Fruit Growers. We adopted a constitution, and shall be known hereafter as "THE NORTHWESTERN ASSOCIATION OF FRUIT GROWERS," to meet annually—next autumn at Dixon. You shall have a copy of the proceedings, which were—to us—rather interesting; but we had no reporters, and can present only a meager outline of the sayings of the speakers, which constituted the principal interest of the meeting, aside from the show of fruits.

It is the object of this Association to recommend a western list of fruits, and gather local information, and look to the interests of the western Fruit Growers, etc., etc. But you will hear more about us in good time, doubtless, this being for your private edification. [But so welcome a piece of news that it is laid before the reader, who will, no doubt rejoice that the broad plains of Illinois are already producing rich fruits and wine, to refresh the heart of man. The copy of the "Proceedings" shall be welcomed and noticed whenever it comes along. A visit to Dixon, next year, will make a very pleasant excursion for any of us who may not happen to be engaged with other shows at that time; and it is to be hoped that an early correspondence among the leading societies will enable them so to arrange their autumnal gatherings as to avoid interfering with one another.—ED.]

THE AILANTHUS AND ITS CALUMNIATORS.

MR. EDITOR:—Notwithstanding the much vaunted intelligence of our people, there is perhaps, no country on earth where scientific humbugs vegetate so luxuriantly, or where the undigested, and indigestible ideas of the so called learned men, obtain such unlimited credence.

A strong case in point is the abuse which certain medical gentlemen have heaped upon that well known, and once universally admired shade tree, the Ailanthus, and the ready gullibility of a large portion of the public in believing the calumny. The Ailanthus, sir, is not only the best shade tree we possess, but it is immensely superior as a city shade tree to any other native or foreign. Its rapid growth, its entire exemption from the attacks of insects, its power of enduring our driest summers, without apparent injury, the luxuriant verdure of its foliage, which never changes color or decays during summer, and its splendid Palm-like form, so suitable in proximity to fine buildings, give it a superiority which no other tree possesses for such purposes. True, it has a few faults, one of which, and that the most objected to, is the disagreeable smell of the blossoms of the male plant. The female tree is not liable to this objection; it is, however, in other respects inferior to the male, being of slower growth and smaller size. But this nuisance if such it be, lasts for only about two weeks in the year, and it may be greatly abated if the pavements and roofs are swept three or four times during the period of flowering. At all other seasons the Ailanthus is the cleanest of trees—never shedding a leaf until after the first severe frost of winter, when all the foliage comes down at once, while Lindens, Maples, Poplars, Elms, and other trees shed their leaves, more or less, through the summer, and are a continual nuisance. The

only other objection urged against the Ailanthus is the tendency it has to throw up suckers when planted in the country. This may be obviated by planting only trees raised from *Seed*. In cultivated ground the suckers may be easily kept down by the hoe, and in lawns the scythe will soon eradicate them. I have never observed the suckers make much headway unless in the gardens or fences of lazy, careless persons, and there, weeds of all sorts flourish equally well. The Ailanthus is well worthy of a place in the country, its peculiar form and color making a strong and picturesque contrast to most other trees. But behold, some eastern ladies or children sickened, and certain eastern medical men, unwilling to acknowledge their own agency in producing the mischief, pounced upon the Ailanthus as a scape goat, and gave it a bad name. Our Solons in Washington, upon hearing this, suddenly discovered that the fine trees which had been growing for years around the capitol, without injuring anybody, were creators of miasma, and, as I have been told, had them all cut down. The hostility to the Ailanthus spread through the country, and at one time it was supposed that the universal yankee nation would root them out as effectually as they did the Choctaws and Chickasaws. Luckily the cry of mad dog did not prevail here in Cincinnati, and we have still, thanks to the good sense of our people, some noble specimens of this tree in our city and its neighborhood, overshadowing the thresholds of some of the oldest inhabitants, who never found out that the Ailanthus was unhealthy until the wise men of the East raised their voices about it. I have been acquainted with this tree for twenty years, and have handled more of them, I think, than any ten of your medical gentry. I have never known a single instance of injury

caused by the smell proceeding from their flowers, and I can not believe the mere assertion of any one to the contrary. Medical gentlemen have also objected to keeping plants in sleeping rooms, Roses, Heliotropes, etc. It is, however, well known that no injury results from the few plants ordinarily kept in rooms, which, however, are much more likely to cause miasma than Ailanthus trees growing in the open air. It was once believed that the Upas tree (*Antiaris toxicaria*) exhaled a poisonous vapor, and the most absurd stories were related by *learned men* concerning it. It is now certain that it is only poisonous when its juices are taken into the system through the stomach, a wound, or a tender part of the flesh. I have

repeatedly handled the Upas tree, and never sustained the slightest injury from it. Most vegetable poisons operate in the same manner, and as to the smell of these flowers, I believe no one will assert that the combined odor of all the flowers in Ohio, would equal the stench of one of our large soap manufactories, where it is well known the workmen continue as healthy and robust, as in any other city occupation. As to the miasma story, it strongly resembles the grand Ozone theory and the numerous other humbugs propounded by the medical philosophers during the prevalence of the cholera, having no existence unless in their own romantic imaginations. Respectfully, M. K.

A FINE PEACH ORCHARD.

A few weeks since when at Cleveland, I assayed to visit a celebrated peach orchard in that neighborhood, but, like the German student, just in sight of the Imperial City, who returned from his darling pursuit, because he had spent half his money, so myself was disappointed in this undertaking when almost within hail of this orchard, because I had spent half the time allowed me by the Rail Road, which stops for nothing—but a steamboat smoke on the lake. The description of this orchard by the "Plain Dealer" is probably correct in the main, and the conclusion is fully acceded to—with regard to the favored strip of land lying within the influence of the lake.

We yesterday visited Morse & Houghton's Peach orchard and nursery, situated on the St. Clair road, $3\frac{1}{2}$ miles east of the Court House. The orchard of 93 acres, contains the following: 6,500 peach trees, of which are bearing about 4,500; apple 2,000; cherry 400, quince 750, and pear, apricot, nectarine, plum and grape-vines about 7,000, making a total of sixteen thousand six hundred and

fifty trees. Sixteen acres more is intended to be planted out in trees next year. The present crop of growing peaches is estimated at 4,000 baskets, and promise to be the first sent to any market. They consist chiefly of French Early Rare Ripes; Early York, Morris Red; Old Mixons, (1,500 baskets) Honest John, Crawford's early and late Malacaton, Heath Free and Smock Free. No finer varieties can be produced in any market. Several gentlemen from the East have visited this establishment the present season, and pronounce it the finest orchard of healthy trees ever seen. The land is entirely devoted to trees, scarcely any crops being planted between them; the whole is ploughed three times a year, and kept clean and mellow.

It is indeed a goodly sight to see so many broad acres shaded by young and thrifty trees, all beginning to bend their boughs under the weight of choice fruit, and fruit too which we are sorry to learn, is generally cut off in most other parts of the State. Already speculators from Cincinnati and Buffalo have offered to contract for the entire crop of this orchard at \$3 per bushel, for the peaches. This lake shore region is destined to be the finest fruit growing country in the United States.

MICHIGAN VILLAGES--YPSILANTI.

SOME traveler who has enjoyed the privilege which has been denied me, of rambling about in the peninsular State, thus descants upon the delights of one of the beautiful towns of that thriving State; and as it is one that contains a firm friend of the Western Horticultural Review, and a valued correspondent, I take great pleasure in giving the following description from the *Michigan Farmer*, as it shows the gardening propensities of the inhabitants:

We should be glad to speak of the villages on our route. Niles, Kalamazoo, Battle Creek, Albion, Marshall, Jackson, Ann Arbor, all present a very thrifty and enterprising appearance. Ypsilanti suffered, a few months since, most severely by a fire; but the true spirit of Western enterprise will soon more than restore what the fire consumed. The village is pleasantly situated on both sides of the Huron river, 30 miles from Detroit. It does not show to advantage from the railroad, but it has really very much to attract and interest a stranger.

Our social intercourse with the good people of Ypsilanti, is remembered with great pleasure. Shall we say what was to us the object of interest next to these? A garden—aye, a garden. Shall we draw upon our imagination for a picture of a dwelling and a garden, not such as might surround the palace of some European des-

pot, but one where a cultivated republican simplicity, and an easy abundance, might spend a green old age in generous hospitality and social enjoyment. The garden should be on the high bank of a beautiful river, bearing some Indian name. On the side of this almost perpendicular bank, should grow the forest oak, the linden, and the cedar, where the brown thrush and the robin might build their nests undisturbed, and pour forth their sweet, joyous songs, at the opening and the close of day. In the garden, fruit trees of the choicest varieties should grow in abundance. The currant, the raspberry, the strawberry, and the grape, should have their place. Embowered in forest trees, with roses and "flowers of all hues," on either side, let the family mansion rise, of ample but not ambitious proportions. Within, upon the walls, hang the family pictures—the son and the daughter, the children and the grand children are there. The library is stored with books. And over all these, presiding in quiet simplicity, are those upon whose heads rest "the blessings of the poor," and who enjoy the respect and the confidence of all; and what more is left for the heart or the fancy to desire? But this is no fancy picture. Its reality can be found on the banks of the Huron river, in the village of Ypsilanti. Can you wonder that the junior editor returns to his post refreshed in spirit, and better fitted to endure the drudgery of an office? B.

THE PINE AND CEDAR FORESTS OF CALIFORNIA.

Of all the wonders I have ever seen in the vegetable kingdom, nothing will bear comparison with the magnificence and lofty growths of Cedars and Pines which embellish the hills and mountains that lead to, and make up the great Sierra Nevada Range. The magnificence and grandeur of scenes in which these trees abound, can not be imagined by any one who has not seen them, and felt the awe and sublimity to which they give rise. I have counted in a circle fifty feet in diameter, thirteen Pine trees, not one of which was less than three feet in diameter,

or less than two hundred and fifty feet in height, nor was any one of them marked by the slightest curve or inclination. They are the inimitable and lofty monuments of nature, uninfluenced by the sweeping storms and winds, unbent and undecayed by a centurion age. Not a limb or a knot can be found upon their bodies, until you reach an altitude of from one to two hundred feet, beyond which height they continue to grow until their towering majesty overawes all surrounding objects, and affords a fit refuge for the noble bird which adorns the banner of our country.

No man can travel through these scenes without feeling that the grandeur of Omnipotence itself is teaching him his finite and insignificant powers. Such was the moral influence of these leviathan growths of Cedars and Pines upon my mind, I would not have dared to have given entertainment to a fugitive thought against the supremacy, wisdom and power of Jehovah. Such are the Pine and Cedar forests of California. And when you reflect that they covered an area of hundreds if not thousands of square miles, you are prepared to admit the importance of this claim which we would urge upon the consideration of our friends in the East.—*Toronto Globe.*

THE CEDARS OF CALIFORNIA.

Those who have seen the large Cedars surrounding the Castle of Chapultepec, in the Valley of Mexico, which tradition says were planted by one of the Aztec Princes in the 11th century—will find no difficulty in believing the following account of the monstrous Cedars found on the Pacific Coast. A California correspondent says:

Your readers have heard of the gigantic cedars of the Pacific coast. They are found to the North as you approach Oregon—near Humboldt Bay and the famous Gold Bluffs. It is hard to credit the stories that every body brings home who goes there. A tree sixteen feet in diameter, and having a trunk of two hundred feet in length, *beneath the branches*, is of moderate size. I am assured that the largest are thirty feet in diameter. A friend of mine, Robert Lamot, Esq., of this city, informs me, that he and his brother measured a tree near Humboldt, passing round it with a tape as high as they could reach, and found the circuit to exceed *ninety feet!* These monsters are apt to be hollow, and it is not uncommon, to find them converted into human habitations. Redwood is the name commonly applied to this species of cedar, from the color of the wood, which is very soft, and has a remarkably straight grain, so that thin and perfectly even strips may be split off many feet in length. I should have mentioned that the entire length of the largest of these trees exceed 300 feet.

Exchange.

ON THE CULTIVATION OF THE STRAWBERRY.

The Strawberry belongs to the Natural Order, *Rosaceæ*, and to the class Icosandria; order, Polygynia, *Linnaeus*; its generic name, *Fragaria*, is derived from *fragrans*, odorous, on account of its fragrant smell. There are three indigenous species, viz: *Fragaria elatior*, *F. vesca*, and *F. calycina*; they are to be found mostly in woods and shady places, except *elatior*, which is not so common as the others.

The strawberry is very widely diffused, being found in most parts of the world, especially in *Europe* and *America*. Its common name is peculiar to all, and is supposed to have been derived from the custom of laying straw under the plants when the fruit begins to swell. Others contend it is from *strayberries*, because of its trailing along the ground. The fruit was known in

London, as an article of ordinary consumption in the time of Henry Sixth. In a poem of that age, called "London Lyckpeny," by John Lidgate, who died about 1483, we find the following lines:

"Then unto London I dyde me hye,
Of all the Land it bearyeth the pryse;
'Gode pescode,' one began to cry,
'Strabery rype, and cherrys in the ryse.'"

I will now mention some that that were brought early into notice. The common wood strawberry was probably the earliest cultivated. The Virginian, or old scarlet, was introduced from *Virginia* about the beginning of the last century. The Alpine strawberry continues to bear till late in the season. The Hautbois was the first known of the large variety of strawberries. The fruit is of a peculiar flavor.

The Chili strawberry was introduced into the Royal Gardens at Paris, and about the year 1727 it was brought to *England*. Its fruit is large, and of a light color, and but little in esteem.

Having enumerated a few of the original kinds of strawberries, I will now proceed to notice the cultivation of this general favorite. In the first place, the ground which is to form the beds should consist, if possible, of a loamy soil, if the natural soil is not of this nature the cultivator will be well repaid by procuring some of it. Having chosen the ground for the beds, let it be cleared of all weeds and then trenched; after being leveled, put on a good dressing of strong heavy loam; if manure is applied, the condition of the soil must be taken into consideration. Let this dressing be then forked just under the surface, so that the plants may find benefit from it, for the roots of strawberries are generally abundant near the surface. The plants to be selected for planting should be from the youngest stock, and those runners nearest to the parent plant. They should be planted eighteen inches apart, each way, so that they may appear to be in a straight line in whatever direction the eye may look on them.

When plants have plenty of room, and are kept apart, they produce finer fruit than when they are suffered to grow in a thick mass. In that state they never set so well and are comparatively worthless. The operation of planting should be performed in September, as they will then have time to make fresh roots and to stand the weather. After the plants have taken root, the next thing is to guard against severe frosts by laying between them some old tanner's bark, sawdust, the decayed leaves of trees, or branches which have the leaves on them.

In the following summer they should be kept clear of weeds, and all runners should

be taken off as soon as they are produced, unless otherwise required.

In autumn, clear the beds of all decayed leaves and weeds, then lay some soil over the surface between the plants, as this will strengthen them for the following spring. In spring when the danger of hard frost is over, the ground between the plants may be carefully forked over, breaking all the clods of earth that may come to the surface; and in doing this, the loam that was put on in the autumn will be buried, and form a good dressing to the plants; then about the beginning of April, cover the beds with a coating of moss, short grass, or straw, it will be of much service in keeping the beds moist, and preventing the fruit from being splashed by heavy rains, which are very injurious to the flavor of the fruit.

I am convinced that where this method is practiced, plenty of good fruit may be obtained. I may justly observe that many growers complain that they can not fruit certain kinds, and cast out forever as unworthy of notice, the British Queen, Keen's seedling, Victoria, and several other foreign and native varieties. To such I will say I have seen the above named varieties, including Prince Albert, Myatt's Pine, with larger, better flavored fruit, and more prolific than any of the crack prized varieties I have seen in *America*.

Lastly, select a few of the principal varieties in cultivation in Ohio, or whatever part of the United States you may live in, with a few imported varieties which your experience proves will answer in your climate. Grow them in a fresh, rich, loamy soil, and renew the plants every two years. Keep the ground moist in dry weather. If you can protect the blossom from Jack Frost, and attend to the above directions, the sexual character need not be studied.

GEORGE SWANSON.

REMARKS.

This communication is inserted from a desire to gratify a well-meaning man, and to allow the reader to reap the benefit of an English Gardener's experience. It is hard to learn when we have to begin by unlearning all; but it doth appear marvelous, that

some persons continue their opposition to the light of scientific botanical observations, as well as to the practical result before their eyes, even when under the immediate influence of "the theory," and near the Cincinnati market with its thousands of bushels of strawberries open to observation.

MICHIGAN FRUITS.

DR. WARDER:—It may not be uninteresting to some of the readers of your excellent Review to hear something about Fruit growing in the Peninsular State. Having resided here for the past sixteen years, I will try and give you a short talk about fruit in general.

It is but about six years since the people in this part of the State became convinced that we could grow fruit in Michigan, as we were formerly subjected to late frosts in the Spring, that would invariably destroy all fruit after the blossoms were off; consequently but few planted orchards, and those who did were doomed to disappointment. At length a change seemed to take place in the seasons, and we are now blessed with an abundance of all the choice fruits grown in a northern latitude.

Apples can doubtless be grown here with great profit, for the eastern market, as our soil is well adapted to a vigorous growth of the tree, and the fruit is at least one-third larger than the same variety grown as far East as the Hudson River and New England. I have observed also that apples mature much earlier than in the eastern States, say from two to six weeks. We have also many new varieties in our collections far superior to many of those cultivated East of the Lakes, which perhaps are better adapted to orchard planting in the West,

than if taken East or South. The Baldwin, Rhode Island Greening, or Newtown Pippin, are not with us ranked as high as in New England. They are all considered as shy bearers with us, while the Gate apple, Carolina June and Roman Stem, stand deservedly high; yet you can hardly find them in an eastern collection of fruit.

Pears do finely in this State; perhaps there is no part of the world where they flourish better than in Michigan, and certainly no place where the trees have obtained a larger size than on the Detroit and Raisin Rivers. There are pear trees standing near Detroit and Monroe planted before the Revolution, by the early French settlers, that have obtained at least sixty feet in height and over two feet in diameter, and they are yet vigorous in growth, bearing sound fruit, although of an inferior quality, being seedling trees.

The pear blight is not yet known with us. I have a White Doyenné (Virgalieu) which has produced pears this season measuring eight and a half inches in circumference, and weighing seven ounces: such a thing as a cracked pear of that variety (so much complained of at the East) was never known here.

Plums ripen in great perfection; although the curculio has been making his mark in the eastern part of the State, and will doubtless

reach us soon. It is a great consolation to witness the vigorous growth of the tree, if the little "Turk" does claim all the fruit.

Peaches are a sure crop with us, on ground somewhat elevated, and they are beginning to grow them here to some extent for the Detroit, Chicago and Milwaukee and other markets.

A friend of mine, on the St. Joseph River, sold over four hundred bushels last season, to go to Milwaukee, and that amount was but a small part of his crop grown on four acres of ground. The grub is the only enemy we have to contend with in growing peaches. The yellows has never been known here.

Cherries have not been grown with us as yet, except the Duke and Morrello; but the Heart and Bigarreau varieties have been introduced, and have fruited with some, although not sufficiently tested to determine with what success they can be raised. There has been annually a warm contest with the birds for the privilege of gathering what cherries have been raised.

We have two Horticultural Societies in the State; one at Detroit and one at Adrian, the latter but recently organized. We have also a State Agricultural Society, which held its third Annual Fair at the city of Detroit, on the 24th, 25th and 26th days of September last, being well attended, with a fine display of fruits.

Many of the counties have organized agricultural societies, also awarding premiums for fruit. Kalamazoo has, however, taken the lead in agriculture, having held her Sixth Annual Fair, at this place on the 1st and 2d inst., with a fine display of fruits, for which premiums were awarded.

Before I close, I wish to state a problem for yourself, or some of your correspondents, to solve, viz: I have in my orchard five Seek-no-further apple trees, all planted at the same time, and of the same appearance;

bearing fruit of the same quality, and ripening at the same time, except one, and that ripens its fruit about six weeks earlier than the other four, making it a summer apple. Why is it so?

A. T. PROUTY.

Arcadia Nursery, Kalamazoo, Oct. 13, '51

EDITORIAL REMARKS.

This letter from a sensible and very practical man, in a region most favorably situated for fruit growing, will be read with great interest. In the name and on behalf of the readers of the Review, I thank friend Prouty for the information he has conveyed, and cheerfully bear testimony to his accounts of their fruits, for we have never seen such noble specimens of beautiful apples, as are now in our markets from the Peninsular State. The Pear trees at Detroit have been a matter of surprise and admiration, and should have been noticed before this in these pages, had not my traveling notes been kept back to admit other matter.

The peculiarity of his Seek-no-further may possibly be owing to the influence of the stock upon which it was grafted, a disturbing influence not sufficiently studied—suspected but not understood. Before adopting a theory, however, let us hope to gather other facts bearing upon the case. Who will aid us in the work of observation?

Thanks for the catalogue sent, from which it is apparent that the good people of Michigan may be well supplied with many choice variety of fruits already introduced among them, by the nurseryman of Kalamazoo. And many of the good folks in this region, too, might desire to procure trees of the sorts which furnish those splendid specimens to which I have alluded. Some of the kinds are not cultivated here, at least not to any extent.

THE CINCINNATI HORTICULTURAL SOCIETY

MADE a grand effort at the commencement of October. The Annual exhibition was opened on the first of the month, and the display was very handsome, notwithstanding the exceedingly dry and hot weather which had characterized the preceding three months, during which time there has been very little rain, and the ground was dried to a great depth. The most striking feature of this exhibition was the very fine specimen plants to be found in every collection. In this particular, our gardeners are emulous of distinction and are certainly deserving of high praise for the result of their efforts. Such plants are seldom seen in this country, as were there shown. It would be impossible here to particularize all that were superior, but a few may be mentioned. The *Verbenas* grown by D. McGready, gardener to R. P. Resor, Clifton, were brilliant with abundant flowers. The *Fuchsias*, from Wm. Evans, gardener to W. Resor, Clifton, were large, handsomely shaped and covered with their graceful flowers of varied hue. S. S. Jackson, who has so long been noted for his admirable specimen plants, that contribute a great interest to our exhibitions, made a fine display—better even than usual—among which were many fine plants, not yet common among us, though propagated by the best cultivators. His care in training is worthy of note, and, to a certain extent, of imitation, as variety is an increased source of pleasure. A *Verbena*, *Defiance*, was trained up to a single stem eighteen inches high, and then branched and drooping gracefully, so as to present a very novel and pretty effect. Mr. Jackson, who has been very successful in growing seedling *Azaleas*, exhibited one of those that were so much admired last spring; it was blooming beautifully and had continued to do so during the summer, show-

ing a perpetual character that is not common. The *Azalea* is one of the dwarfish character, being a cross between *Variegata* and *Prince Albert*.

The displays of *Dahlias* were not so large nor so fine as usual, in consequence of the drought. But the excellence of the kinds was apparent, not only in the lists but also upon many of the stands. It was a subject of regret, however, that one of the displays was not provided with water and that the flowers consequently withered and faded during the exhibition.

The large display of these gaudy flowers sent from Cleveland by McIntosh & Co., was very welcome, and showed the favorable influence of the lake atmosphere upon vegetation, especially during a severe drought.

The designs this year were generally of a different character from those shown previously, and in some respects, exceeded them in attractiveness. That produced by Wm. Evans, Clifton, represented a beautiful arbor, perfectly covered with living plants, climbers, which being in full bloom, presented a very pretty appearance; the rich blue, tender red, and pure white of the varieties of *Mau-randya*, with other species, and the delicate foliage of the cypress vine intermingled, produced a very pretty effect. The mossy floor and benches were a nice retreat for the juveniles. It was proposed by one of the visitors that such a thing should be made with a light and strong frame-work of wire, woven into a sort of canopy over and about a seat suitable for bridal occasions, to which it might be profitably hired. Will any one improve upon the suggestion next year? The Bouquet stands and tables were very pretty, especially the *Epargne*, mossed and ornamented, and constantly furnished with beautiful bunches of flowers by the young

gardeners, John and Isaac Jackson, already so well known to our society, and whose contributions from this stand sold for thirteen dollars. The moss tables of the Misses Jackson, and that from John Sayers were also centers of attraction, on account of their bouquets. Several contributors showed their fruits and flowers upon fancy designs that were very attractive, but it would be tedious to specify all that were present; the reader is referred to the lists, and to the reports of the committees for further information.

Bouquets, notwithstanding the drought and the grasshoppers, were abundant and beautiful, indicating an improving taste in their formation, as they begin to lose that formal stiffness and regularity on the one hand, and also that perfect *abandon* and confusion characteristic of the less artistic style. This department of the art of gardeners has a fine opportunity of being developed here, with the growing wealth and taste of our population, which maintain an increasing demand upon the kingdom of Flora for these collections of her "Day-Stars," which e'en in mid-winter serve to adorn the bright-eyed maiden when her charms are displayed in public, and are also the cherished inmates of our fire-side homes when rude Boreas bids us seek our pleasures, where, indeed, they should ever await us—at home—and what gift, of a transitory character at least, can so enliven the domestic hearth as a simple bouquet of beautiful flowers, making bright summer within while rude winter reigns without? I can not now specify all the contributors in this department. The most extensive collections were from Messrs. Jackson, Heaver, Sayers, Knott, etc., all of whom are well-known to our community for their tasteful productions of this kind, as well as for their success as gardeners.

Grass Bouquets do not yet reach to that degree of perfection to which they are attain-

able, even as dead specimens; they are still too formal, stiff, and regular for the requirements of good taste.

Fruits.—Apples and Pears were mostly from abroad; a large display of apples from Lorain Co., and some fine specimens of pears and apples from Cleveland, sent by Messrs. Kirtland, Elliot, McIntosh & Co., and others. Splended collections of Pears from Jno. Morse, of Cayuga Bridge, Ellwanger & Barry of Rochester, and mixed displays of fruits from "The Syracuse Nurseries," and from A. Frost & Co., Rochester, were very much admired and attracted no little attention.

Grapes.—The Hardy Grapes were very fine, though the season was far advanced and the crop had been generally harvested. The bunches from S. Rintz, H. Duhmé and Gabriel Sleath, were extraordinarily fine. The foreign grapes were more abundant and finer than heretofore. The collection from R. B. Bowler was very extensive, and embraced some kinds that have never been exhibited upon our tables before. Those from W. Resor's houses were remarkably fine and large. His young plants, grown from eyes set in the spring of 1850, though not bearing large bunches were fine. Mr. Heaver exhibited a varied collection, embracing some of the best varieties. He also had some exhibited in pots.

THE FOLLOWING ARTICLES WERE EXHIBITED:

CUT FLOWERS AND BOUQUETS.

Mr. Heaver, 2 large baskets.

Jno. Sayers, 1 large basket.

D. McAvoy, 2 large baskets.

Misses Rintz, 1 basket evergreens and Cut Flowers for decoration.

Mr. Sleath, 1 basket Cut Flowers.

Thos. Knott. 23 hand bouquets—3 flat, 3 extra.

Mrs. A. Stewart. 1 large pyramidal in a vase, 1 grass bouquet and vase.

Mrs. Sleath. 20 large bouquets.

Mrs. Bickham. A mignonette and rose bouquet.

Wm. Heaver. 2 round, and a display consisting of 35 hand bouquets.

By R. P. Resor, 2 bouquets.

Anna and Jane Warder, 2 grass bouquets.

W. Cox, 2 large grass bouquets.

By Sarah Ives, 1 winter bouquet, 1 fall bouquet.

By Mrs. E. Ferguson, pair grass bouquets.

DESIGNS.

By Misses Jackson, 1 moss table and basket of flowers. Six hoop wreaths.

By S. S. Jackson, 1 thirty-feet wreath.

By Jno. H. and Isaac H. Jackson, 1 fancy bouquet stand with 24 round and 2 hand bouquets.

By Lewis Jackson, 1 small design, a temple in moss, ornamented with flowers.

By Wm. Evans, gardener to Wm. Resor, 1 Arbor of Living Plants. Design do.

By Jno. McFadden, Floral design of hearts and diamonds, one model flower garden and cottage.

By R. P. Resor, 3 rustic tubs, 2 vases.

By M. McWilliams, a gothic mossed stand with fruit.

I. C. Ferris & Co., an Evergreen Wreath, 30 feet long.

Mrs. A. Stewart, Moss Basket.

Miss S. Ives, Fancy Basket of musk melon seed.

D. McAvoy, a painting of McAvoy's Superior Strawberry.

Edw. Knight & Brothers, a specimen of Isometric Drawing.

W. Heaver, picture of Palestine Grape.

Mrs. A. Stewart, Ornamental Basket of Sea-weeds.

GREENHOUSE PLANTS.

Mrs. Bickham, one vase Lycopodium. One plant Bird Pepper.

C. S. Burdsall, 3 Nerium Splendens. 1 Night Blooming Jessamine.

Mrs. A. Ewing, Seedling Lantana.

By Geo. Swanson, gardener to Mr. Longworth. 2 Caladium esculentum, 2 Nerium Splendens, 1 Plumbago capensis, 1 Cathanthus albus, or Vinca alba, Musa coccinea, 1 Hoya carnea, 2 Begonia Evansiana, 2 B. parvifolia, 1 Veronica Lindleyana, 1 Russelia juncea. 6 Oxalis Bowii, 1 Euphorbia splendens, Ficus elasticus, 1 Heliotropium, 1 Solanum jasminoides, 1 Manettia cordifolia.

I. C. Ferris & Co. 1 Begonia grandiflora,

1 Begonia parvifolia, 2 Plumbago capensis, 1 Plumbago Larpentæ, Leschenaultia formosa, Heliotropium Voltaireanum, Heliotropium peruvianum, Heliotropium Souvenir de Liege, Cuphea platycentra, Vinca rosea, Babiana imbricata, Epacris grandiflora, Abutilon striatum, Salvia coccinea, Manettia cordifolia, Tom Thumb Pelargonium, 2 varieties of Tree Carnation, Double Feverfew.

By W. Heaver. Plants for best collection in bloom, Begonia parvifolia, Cuphea platycentra, Lantana Ewingii, Veronica Lindleyana, Bouvardia triphylla, Loasa aurantiaca, Vinca rosea, Vinca alba, Lantana mutabilis major, L. aurantiaca, Abelia rupestris, Zauschneria californica, Salvia Splendens major, Justicia purpurea, J. carnea, Rondeletia speciosa, Clerodendron speciosum, Hibiscus sinensis, Hibiscus rosea, Pentas carnea, Allamanda cathartica, Manettia cordifolia, Ixora rosea, Maurandya Barclayana, Maurandya rosea, Maurandya albiflora, Abutilon venosum, Æschynanthes grandiflora.

By D. McGready, gardener to R. P. Resor. *Verbenas*.—3 Defiance, 1 Reine du Jour, 1 Jackson's No. 24, 1 Iphigene, 1 Susanna, 1 Magnificent, 1 Marguerite, 1 Jackson's No. 25, 3 Beauty Supreme, 1 Kossuth, 1 Maria Louisa, 1 Melindris major, 1 Harlequin, 1 Exquisite, Jackson's No. 18, 1 Queen of Whites, 6 Seedlings, and 24 var. cut flowers.

Two Begonia parvifolia, B. incarnata, B. fuchsioides, Lycopodium, Abutilon venosum, 3 Torrenia asiatica, Justicia carnea, 2 Coffea arabica, Ardesia crenulata, Rondeletia speciosa, 2 Lantana fucata, Vinca rosea and alba, Russelia juncea, Maurandya Barclayana, M. rosea, 2 Plumbago capensis, Orange, Thea viridis, Seedling Petunia, Heliotropium Voltaireanum, H. Souvenir de Liege, Scutellaria —, Veronica speciosa, 2 Cuphea platycentra, Manettia cordifolia, Angelona Gardneriana, Plumbago Larpentæ, Lagerstroemia indica, Agave americana, Aloe socotrina.

Roses.—La Pactole, 2 Souvenir de la Malmaison, 1 Mrs. Bosanquet, 1 Roi de Cra-moisie, 1 Duo de Chartres, 1 Strombio, 1 La Marque Tea, 1 Grand Perfection, 1 Louis Philippe, 1 Devoniensis, 1 La Thoratine, 1 Prince de Salem, 1 Queen of Burbon, 1 Agrippina, Camellia, Adam Tea, Hermosa.

Fuchsias.—Princess Alice, Epsii, Caroline, Superba, Dickson's Acantha, One in the Ring, Snow-drop. Seedling.

Thos. Knott. 3 Aucuba japonica. *Roses*.

Bourbons of 6 varieties, 1 *Hoya carnosae*, *Salvia leucantha*.

Jno. Sayers. 7 *Begonia Evansiana*, 2 *Begonia hydrocotilifolia*, 2 *Begonia parvifolia*, 2 *Begonia maniculata*, 2 *B. fuchsioides*, one *Amaryllis belladonna*, 1 *Lantana mutabilis*, 2 *Cuphea platycentra*, 1 *Vinca alba*, 2 *Hibiscus sinensis*, 3 *Ficus elasticus*, 2 *Trachelium caeruleum*, 1 *Russellia floribunda*, 1 Thomas Thumb, 14 Roses, *Agave americana*, 2 *Ageratum mexicanum*, *Sedum Sieboldii*, 2 *Rondeletia speciosa*, *Angelona Gardneriana*, *Geranium lutea-rosea*, *Aloe arborescens*, *Techona capensis*, *Hibiscus sinensis lutea*, *Santatalia procumbens*.

By Jno. McFadden, E. Walnut Hills, *Heliotropium Souvenir de Liege*, and *Voltaireanum*, *Abutilon venosum*, *Lantana fucata*, *L. multiflora*, *Maurandya Barclayana*, *Justicia caerulea*, *Cuphea platycentra*, *Salvia splendens*, *Russellia juncea*, *Oxalis Bowii*, *O. floribunda*, *Ageratum mexicanum*, *Achimenes longiflora*, *Sedum Sieboldii*, Tom Thumb and Nutmeg *Pelargoniums*, *Solanum jasminoides*, *Nerium splendens*, *Lobelia ramosa*, *L. gracilis*, Tuberoses, a collection of Annuals, a specimen rose *Compte d'Eu*.

By S. S. Jackson, *Thunbergia chrysops*, *Furcraea gigantea*, 3 *Salvia splendens major*, *S. leucantha*, *Lantana rubra*, *L. mutabilis*, *Zauschneria californica*, 3 *Fuchsia Coralina*, *Hibiscus sinensis*, do. do. *flore pleno*, *Cereus stellatus*, 3 *Lycopodium*, var., 2 *Allamanda cathartica*, *Quisqualis sinensis*, *Euphorbia splendens*, *E. Bryonia*, *Ipomea Horsfallii*, 2 *Angelona Gardneriana*, *Pelargonium Lucia Rosea*, 2 do. Tom Thumb, do. Brighton Hero, *Jasminum multiflorum*, *J. gracilis*, *Acacia pubescens*, *Stigmaphylon ciliatum*, *Russellia juncea*, *R. floribunda*, *Ardesia solanacea*, *Manettia cordifolia*, *Illicium floridanum*, 4 *Cuphea platycentra*, *Clerodendron squamatum*, *Calathea zebrina*, *Gesneria arborescens*, 2 *Oxalis Bowii*, *Sollya heterophylla*, *Gardenia tubiflora*, *Medianella erythrophylla*, *Ixora coccinea*, *Aloe variegata*, *Cyrtoceras reflexa*, 2 *Abelia rupestris*, *Coffea arabica*, *Torrenia Asiatica*, *Polygala myrtifolia*, 2 *Achimenes picta*, 2 *A. patens*, 2 *A. Lipmania*, 2 *A. grandiflora*, *Gloxinia* (seedling) Double myrtle, *Zinziber officinalis*, Seedling *Azalea in bloom*, *Verbenas* in pots, *Reine du Jour*, *Iphigène*, *Ste. Marguerite*, *Beauty Supreme*, *Defiance*, *Harlequin*, *Exquisite*, *Snow Flake*, and Seedling No. 25.

By W. Evans, a large and choice collection of beautiful plants, the list not at hand.

DAHLIAS.

I. C. Ferris & Co. *Jenny Lind*, *Belted Knight*, *Harriet Nickay*, *Isis*, *Prince Albert*, *Triumphant*, *Sir Edward Antrobus*, *Queen of Primroses*, *Rainbow*, *Queen of England*, *Faustine 1st*, *Mrs. Herbert*, *Phoenix*, *Pontiac*, *Toison d'Or*, *Queen of England (N. Y.)*, *Walter Hilson*, *Star*, *Victoria regina*, *Hypolyte*, *New York White*, *Belle de Paris*, *Standard of Perfection*, *Gaiety*, *Marchioness of Lorn*, *Lady of the Lake*, *Cheltenham Queen*, *Mrs. Buchanan*, *Bathonia*, *Magnificent*.

Mrs. Sleath. Large lot of cut Dahlias.

W. Heaver. *Bel de Donc*, *Beauty of Paris*, *Isis*, *Bijou*, *Cleopatra*, *N. Y. White*, *Roi des Pointelles*, *Fire column*, *Standard of Perfection*, *Lady Antrobus*, *Mont Blanc*, *Indispensable*, *Marchioness of Lorn*, *La Tour d'Auvergne*, *Marchioness of Exeter*, *White Defiance*, *Phoenix*, *Queen of England*, *Col. Baker*, *Mrs. Buchanan*, *Constantia*, *Miss Blackmoor*, *Jenny Lind*, *Cheltenham Queen*, *Caleb Cope*, *Rival*, *Queen of the French*, *Rosetta*, *Mrs. Shaw Lefevre*, *Viscount Ressiguire*, *Toison d'Or*, *Dazzle*, *Miss Lex*, *Mrs. Jones*, *Queen of Primroses*, *Gaiety*, *Hypolyte*, *Lady of the Lake*.

D. McGready, Gardener to R. P. Resor: *Emily*, *Prince Albert*, *Gaiety*, *Marchioness of Lorn*, *New York White*, *Magnificent*, *Fire Column*, *Madame Zahler*, *Richard Cobden*, *Isis*, *Rainbow*, *Joshua Longstreth*, *Miss Blackmoor*, *Queen of England*, *Admiral Stopford*, *Visct. Ressiguire*, *Emperor de Maroc*.

McIntosh & Co., Cleveland. *Metropolitan Queen*, *Standard Perfection*, *Highland Chief*, *Striata Perfecta*, *Seraph*, *Lady Granville*, *Oellet Parfait*, *Florence Dombey*, *Sunset*, *Flora Superba*, *Reliance*, *Mrs. Rushton*, *Remembrancer*, *Jenny Lind*, *Madame Zahler*, *Walter Hilson*, *Miss Vyse*, *Mr. Geo. Clayton*, *Master Merryman*, *Laura*, *Marchioness of Lorn*, *Bertha Von Gera*, *Melaine Adam*, *Grandis*, *Rosetta*, *Alba Purpurea*, *Lord Morpeth*, *Purple Bouquet*, *Ruby*, *Orb*, *Pride of Sussex*, *Queen Elizabeth*, *Miranda*, *Oakley's Surprise*, *Samuel Girling*, *Duke of Wellington*, *Gem*, *Sunbeam*, *Beauty of Osban*, *Gaiety*, *Viscount Resseguire*, *Elizabeth*, *Flying Dutchman*, *Miss Stevens*, *Louisa Schmitz*, *Rainbow*, *Star*, *Fire Column*, *Queen of Autumn*, *Yellow*

Standard, Toison d' Or, Joshua Longstreth, Lady of the Lake, Baron Tretau, Beauty of Hastings, Berryer, Beauty of Sussex, Battle Rival, La Tour de Auvergne, Lady Ann Murray, Mrs. Edwards, Lucena, Duke of Bedford, Pickwick, Lady Cooper, Queen (Widnalls,) Emma Noke, King Philippe, Indian Chief, Striata Formosissima, York and Lancaster, Beauty of Winkfield, Madonna, La Grand Baudin, Unique (Ansells,) Admiral Stopford, Egyptian Prince, Prince of Wales.

By Jno. McFadden, three stands of fine show flowers, containing respectively 24, 12, and 6 blooms.

By S. S. Jackson, a magnificent show-stand of beautiful flowers, very tastefully arranged, but purposely brought in too late for competition.

By L. C. Ferris, fine flowers, in competition for the prizes offered for best twenty, for best twelve, and best six. Owing to a want of care in their arrangement, the flowers soon withered and dried up.

By Jno. Sayers, a large collection of fine show-flowers.

FRUITS.

GRAPES.

Wm. Cogswell, Mt. Auburn. Herbe-
mont.

N. Longworth. Herbemont.

H. H. Duhmé. Catawba grapes, 18 plates
very fine.

M. McWilliams. Cigar-box, Isabella,
Catawba.

W. Heaver. *Foreign*. Blk. Hamburg, 4 living plants, Black Hamburg, Wests St. Peters, White Sweetwater, Black Prince, Black Muscat, Scarges Henling.

M. S. Wade. Schuylkill muscadell, Catawba 2 sorts, Isabella, Native (of Ohio.)

S. Rintz. Monstrous Catawba, Catawba, Lenoir, Guignard.

Mrs. Sleath. Catawba in abundance.

J. Carmichael, gardener to Jno. H. James of Urbana. Catawba, Seedling.

Wm. Evans, gardener to Wm. Resor, very fine Black Hamburgs, in pots and cut bunches.

E. Kelly, gardener to R. B. Bowler, Mt. Storm. Black Hamburg, Muscat of Alexandria, Royal Muscadine, White Sweetwater, Verdello, Black Prince, West St. Peter, Syrian, Poonah (late var.,) Deacon's superb, Black Morocco.

PEARS.

M. McWilliams. Bartlett, Seckel, Butter, Belle of Flanders, Clion, 3 kinds unknown.

R. Paul. Anderson's Favorite, Russet.

Thorpe, Smith, Hanchett & Co., of Syracuse, N. Y., had a fine collection of pears and apples, of which the list is mislaid.

Jno. Morse, of Cayuga Bridge, N. Y., had some beautiful pears in variety.

R. F. Elliott, Dr. Kirtland and A. McIntosh, of Cleveland, O., were all represented upon our tables in fine collections of choice apples and pears.

By Ellwanger and Barry, New York.—Gray Doyenné, Louise Bonne de Jersey, White Doyenné, Long Green, Easter Bergamot, Autumn Burgamot, Dix, Glout Moreceau, Cuveillier, Rousselet Stuttgard, Doyenné Sieulle, Beurré Goubault, Beurré de Koenig, Beurré Beaumont, Duc de Bordeaux, Andrews, St. André, Oliver's Russet, Doyenné d'Hiver d'Alencon, Duchesse d'Angoulême, Catinka, Bergamot Cadette, Belle de Brussels d'Hiver, Bergamot Thouin, Arch Duke Charles, Beurré Rana, Royal Rousselet, Beurré Gris d'Hiver Nouveau, Doyenné Boussock, Jalousie, Pater Noster, Oswego Beurré, Duchesse d'Orleans, Bezi des Veterans, Van Mons Leon le Clerc, Bartlett, Bezi Sans Pareil, Doyenné Rose, Reine d'Hiver, Beurré Beaulieu, Davi, Beurré de Waterloo, Figue Verte, Rousselet d'Hiver, Rousselet Perdreaux, Colmar Musqué, Bonchrétien Fondante, Beurré Diel, Triomphe de Jodoigne, Beurré d'Aremberg, Doyenné Dillon, Fleur Capron, Grand Soleil, Triomphe de Louvain, Bergamot d'Alama, Gros Rateau, Reine de Paybas, Poire Auvin, Henry Fourth, Swan's Orange, Colmar d'Aremberg, Soldat Labourer, Easter Beurré, Belle Lucrative, Vicar of Winkfield, Bezi de Montigny, Brown Beurré, Ritelle, Stevens' Genesee, Prince's St. Germain, Gansell's Bergamot, Orpheline d'Engheim, Seckel, Locke, Napoleon, Pound, Belle et Bonne, Eyewood, Washington, Figue, Belle Cannaise, Chaptal, Glory of Cambrone, Crassanne d'Ete, Belle et Bonne de Zees, Bleeker's Meadow, Rapalje's Seedling, Fondante Van Mons, Dunmore, Beurré Moire, Passe Colmar, Colmar des Invalides, Paul Ambrée, Swan's Egg, Comte Lamy, Chaumontelle, Spanish Bonchrétien, Beurré Capaiaumont, Beurré Coloma, Martin Sire, Benoist, Beurré Superfine.

APPLES.

R. H. Penfield, Lorain co., O. Vandervere, Schenectady, Big Seek-no-further, Peek's Pleasant, Green Newtown, Ladies' Sweeting, Gov. Wood, Nell's Sweeting, Rambo, May Apple, Albany, Holland Pippin, Roxbury Russet, Winter Sweet Russet, Royal Russet, Sweet Russet, Richfield Nonsuch, Westfield Seek-no-further, Mount Pleasant, Striped Gilliflower, Gen. Taylor, Johnathan, White Seek-no-further, Red Seek-no-further, Black Apple, Kelley Apple, Baldwin, Swaar Apple, Romanite, Bellflower, Black Gilliflower, Parkman Apple, Maiden's Blush, Spitzenberg, Butter Apple, Ely Apple, Esopus Spitzenberg, Striped Sweet, Blue Pearmain, Bake Apple, Wine Apple, Douglass Apple, Sweet Vandervere, Ruggles Pleasant, Twenty ounce, Robert's Pleasant, Fall Pippin, Pumpkin Russet, Johnson Apple, Green Newtown, Pound Sweeting, Seedling Apple, Winter Pippin, Golden Pippin, Belmont, Rhode Island Pippin, Rhode Island Greening Madison Apple, Gloria Mundi, Jackson Apple, Jersey Sweet, Fall Harvey, White Bellflower, Orange Pippin, Nicholson Apple, etc.

G. Sleath. Rawles Janet.

C. S. Burdsall. 3 sorts.

William and Samuel Myers, Belmont Co., a very fine apple. Name unknown.

W. F. English, Auglaize Co., Cooper, fine and large.

C. Carpenter, Kelley's Isle, some fine specimens of different fruit.

F. W. Say, and other kind friends, at Rochester, N. Y., contributed fine specimens of apples.

A. Frost & Sons, Rochester, a fine show of assorted fruits, apples pears, etc., no list.

J. H. Watts, Rochester, a basket of Northern Spy apples.

N. Haywood, Rochester, some fine specimens.

S. H. Ainsworth, West Bloomfield, a seedling apple, highly esteemed.

MISCELLANEOUS FRUITS.

M. McWilliams. Apple and Pear Quinces.

Wm. Jones. 5 Watermelons, 5 Muskmelons (nutmeg citron)

M. McWilliams. Figs, 2 varieties.

PRESERVED FRUITS.

M. J. Louderback. 1 Jar Peaches, 2 jars Currant Jelly, 1 jar Pickles.

VEGETABLES.

By W. Resor, a fine display, consisting of Snap Beans, Lima Beans, Long red Onion, Silver skinned Onion, Strasburgh Onion, 2 var. Shallots, 3 var. Potatos, 3 var. Cabbage, 3 var. Beets, Parsnips hollow crowned, Carrots 2 var., 1 curled Parsley, 1 var. Sweet Potatos, 2 var. Turnips red and white Dutch, 2 var. Sugar Corn, 3 var. Pumpkins, 2 var. Squash, 2 var. Muskmelon.

Mrs. Bickham. Shoe-peg Corn, 1 pk. Neshannock Potatos.

Dr. Brisbane. 7 large blood Beets.

G. Sleath. Potatos 5 sorts — Kidney, Neshannock, Shaker Blue, Galena, Cheshire Pinkeye—Turnips, Radishes, field and pop Corn, Peppers.

R. Paul. Turnips, Neshannock Potatos.

R. M. Moore. Basket of field Corn.

Geo. Watson. Ashleaved kidney Potato, Walnut-leaved potato, Forty-fold leaved potato, Red leaved potato, Pheasant eye, Manly's Early Frame, Radical and 3 seedlings.

W. Cox. Potatos 19 var.—Red Mercer, Baltimore Blue, Giant Ash-leaved kidney, English shaw, Pinkeye, Orange, Ladies' finger, Shaker blue Blue Neshannock, White Neshannock (new,) Early Forty-fold, Early regent, 7 seedlings—Parsnips, Carrots, 2 kinds Beets, Egg plants, 4 kinds Tomatos, Cucumbers, Radishes, Lettuce, 3 kinds Onions, Leeks Okra, Shallots, Martynias, Endive, Drumhead Cabbage, Savoy Cabbage, Pop Corn, Field Corn, 2 var. Turnips, Salsify, 6 var. Squashes.

By H. Ives, 1 peck Ash leaf kidney potato, 1 peck Neshannock do., 1 peck Lebanon yellow sweet do., 1 plate large red Tomatos 1 plate head shaped do., 1 plate fig shaped do., 1 plate green sugar Corn. 1 doz. field do. 2 var., 1 doz. sugar do., 1 doz. blue sugar do., new var.; 14 Beets, 3 var.; 1 doz. Altringham Carrots, 1 doz. common yellow do; 1 doz. sugar Parsnips.

By S. Ives, 1 musk melon seed basket, containing five varieties Tomatos.

By S. S. Jackson, White Turnips, Red do., sweet potatos, pop corn.

By Michael Rice, gardener to Jos. Longworth, a large and varied collection from the kitchen garden, which, owing to his indisposition, arrived late and were not well displayed, or they might have received greater praise.

W. Jones. 5 Egg plants, Cucumber for pickles, 2 Cymblins.

Report of the Flower Committee.

To the President and Members of the Cincinnati Horticultural Society:

In presenting this, our report, we congratulate you on the improving taste in Horticulture and Floriculture which was exhibited at your late show, which, considering the dryness of the past season, was highly creditable to the contributors. The task which was assigned us was one of no ordinary labor—to discriminate and award the various premiums to the contending parties. We can not tell if we have pleased all the members, but this we know: we endeavored to do our duty conscientiously, regardless of the smiles or frowns of any person. There is one thing this committee would wish particularly to call to the attention of the President and other official members of the Society. We, the judges acting on this occasion, were very much annoyed during the time we were making our decisions, by being surrounded by the exhibitors. As you must all be aware, the office of a judge on these occasions is a disagreeable employment under the best of circumstances; how much more so must it be when thus situated. We would suggest that at all future exhibitions of your society, before the judges begin their task, that the room be cleared of all persons excepting the various judges, acting on the occasion, and that it be kept closed and locked, until they have finished their labors.

Your Committee submit to you the following List of Awards made by them at your Fall Exhibition, October 1, 1851:

DAHLIAS.

Best 24 varieties, cut flowers, to I. C. Ferris & Co.,	\$10 00
2d best 24 do, John Sayers,	7 00
Best 12 do, W. Heaver,	5 00
2d best 12 do, John Sayers,	3 00
Best 6 do, I. C. Ferris & Co.,	3 00
2d best 6 do, J. M'Fadden,	2 00
Best single bloom, dark color, Wm. Heaver,	1 00

Best fancy bloom, Wm. Heaver,	\$1 00
Best white do Wm. Heaver,	1 00
Best tipped on white David M'Gready, gardener to R. P. Resor, Esq.,	1 00
Best display, Wm. Heaver,	10 00
2d best do John Sayers,	6 00

Best display of Annuals in pots, J. McFadden,	4 00
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VERBENAS.

Best 12 var., in pots, to D. McGready, gardener to R. P. Resor, Esq.,	4 00
Best 6 var., to same,	3 00
Best display in pots, to S. S. Jackson,	3 00
Best 24 var., cut flowers to D. McGready,	2 00

ROSES.

Best 12 var., in pots, D. McGready,	4 00
2d best do, to John Sayers,	3 00
Best 6 in pots, D. McGready,	3 00
2d best do, Thomas Knott,	2 00
Best specimen plant, John McFadden,	2 00

STOVE AND GREENHOUSE PLANTS.

Best collection, not less than 20 var., in flower, S. S. Jackson,	20 00
2d best do, Wm. Evans, gardener to Wm. Resor, Esq., Clifton,	15 00
Best 12 var., in flower, D. McGready, gardener to R. P. Resor, Esq.,	10 00
2d best do, Wm. Heaver	5 00
Best 6 var., in flower, John Sayers,	5 00
2d best do, John McFadden,	3 00
Best specimen plant, in flower, S. S. Jackson,	2 00

BOUQUETS.

Best pair of hand bouquets, to Mrs. Heaver,	3 00
2d best do, the Misses Jackson,	2 00
Best pair of grass bouquets in moss vases, Mr. Wm. Cox,	5 00
2d best do. to Mrs. Emma Ferguson,	3 00
Best pair of indigenous Flowers to Miss Sarah Ives, Mt. Harrison,	3 00

EVERGREEN WREATHS.

Best 30 feet long to Mr. S. S. Jackson,	5 00
2d best do, I. C. Ferris & Co.,	3 00
Best 6 hoop wreaths 20 inches in diameter, Mr. S. S. Jackson,	5 00

DESIGNS.

Best to Wm. Evans, gardener to Wm. Resor, Esq., for a rustic arbor covered with living plants,	10 00
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FLORAL DEVICES.

Best to Mr. John Sayers, for an octagon Moss table to be used as a bouquet or flower stand, - -	\$6 00
2d best to John & Isaac Jackson for pyramidal mossed bouquet stand, - -	4 00

GRATUITIES.

To Mr. Wm. Evans, gardener to Wm. Resor, Esq., for a floral device formed of living plants, - -	2 00
To the Misses Jackson for a moss table containing some beautiful bouquets, - - - - -	1 00
To Mr. Wm. Evans, gardener to Wm. Resor, Esq., for a beautiful stand containing greenhouse plants, - -	2 00
To Mr. John McFadden for a floral device, - - - - -	3 00
To Mr. D. Mc Gready, gardener to R. P. Resor, for a moss vase and bouquet, - - - - -	2 00
To Mr. Thos. Knott, for a display of bouquets, - - - - -	2 00
To Mr. McIntosh, of Cleveland, O., for a display of dahlias, a diploma and - - - - -	5 00
To Mr. Swanson, gardener to N. Longworth, Esq., for a collection of stove and greenhouse plants, - -	5 00
To Mrs. Swanson, for a beautiful floral basket, - - - - -	2 00
To Miss Julia Resor, for two vases formed with the living plants of Lycopodium, - - - - -	2 00

RICHARD DAVIES,
WILLIAM CARMICHAEL, } Com.
I. C. FERRIS,

Report of the Fruit Committee.

The Committee on Fruits submit the following Report of the Fall Exhibition:

The untimely frost on the 2d of May, with the excessive drought of August and September, cut off so much of the fruit in this vicinity, as to discourage many of our most enthusiastic cultivators. And but for the liberal contributions of our more northern brethren, our show of Apples, Pears and Peaches, must have been meager indeed. With their aid, however, and with the bountiful supply of some of the finest grapes, by

our own members, we have been enabled to make a fair display in this department.

Of Apples—a large contribution of some varieties, in fine condition, by Russell H. Penfield, of Lorain county, Ohio; making the best display, entitled him to the premium of \$10 00.

A large and fine collection of Apples and Pears was exhibited, from A. Frost of Rochester, N. Y., for which we award the diploma of the Society.

Also, for a large contribution of Apples, some choice Pears, and a plate of Coe's Golden Drop, from Thorp, Smith, Hanchett & Co., of Syracuse, N. Y., a diploma.

For a contribution of forty varieties of Pears, embracing some of the most rare and valuable kinds, by John Morse, of Cayuga Bridge, N. Y., a diploma.

To Ellwanger & Barry, of Rochester, N. Y., for fifty choice Pears, making the greatest display, a diploma.

Dr. Kirtland, of Cleveland, contributed a good collection of twenty-nine kinds of Pears, and six of Peaches.

McIntosh & Co., of Cleveland, also contributed a fine assortment of Apples and Pears.

M. McWilliams presented a beautiful fancy stand surmounted with 4 varieties of Apples, 7 of Pears, 2 of Quinces, 2 of Figs, and 3 varieties of hardy Grapes—making a handsome display, for which the Committee award a gratuity of \$5 00.

A fine display of the Northern Spy Apples was very gladly welcomed from Jas. H. Watts.

Gabriel Sleath and C. S. Burdsall exhibited several fine varieties of Apples.

For Grapes raised in the open air, although mostly cut off by the frost in May, the season has since been favorable, and many superb specimens were exhibited.

Mr. Rintz made the best display, of 4 hardy, native varieties, large, fair and per-

fect, and is entitled to the 1st premium of \$5 00.

For the second best display, H. Duhmé, a premium of \$3 00.

M. S. Wade made a very handsome display of large, fair and perfect bunches of Catawba, Isabella and a Fox Grape.

Gabriel Sleath also made a large and beautiful display of Catawba Grapes very perfect.

J. H. James, of Urbana, exhibited a new seedling Black Grape, in appearance resembling the Alexander or Cape; large, bunches compact, not shouldered, pulp rather thick, taste sweet and foxy. The committee propose to name it James' Urbana, and deem it highly worthy of cultivation. He also exhibited fair specimens of Catawba.

Grapes under glass—in this department of Horticulture, although new here, the success is most triumphant.

For the largest and best bunch Black Hamburg, weighing 2 lb. 7 oz., by Wm. Resor, raised by his gardener, Wm. Evans, a prize of \$3 00.

For the second best do. weight 2 lb. 5 oz. \$2 00, to the same.

For the best 3 varieties, 2 bunches each, Wm. Heaver, prize \$5 00.

For the 2d best 3 varieties, Wm. Resor, \$3 00.

Wm. Evans exhibited 3 pots of Black Hamburg Grapes raised from eyes planted in the spring of 1850, in the pots, and now bearing three or four large and perfect bunches each, for which a gratuity of \$2 00 is awarded.

Wm. Heaver also exhibited 4 pots of Black Hamburg raised by layering and rooting in pots last spring, and bearing from three to seven bunches each, large and fair; but this method is not considered so good as raising from single eyes. A gratuity of \$2 00 awarded.

Water Melons.—For the best 3 water melons, Wm. Jones, a prize of \$2 00.

For the best Musk Melons, (Nutmeg) Wm. Jones (very fine) \$2 00.

S. M. CARTER,	} Committee on Fruits.
M. McWILLIAMS,	
S. MOSHER,	
JOHN G. ANTHONY,	

Report of the Vegetable Committee.

The specimens of Vegetables on exhibition are fine, and show the fertility of the country in which our lot has been cast. In this department of the exhibition the awards of premiums have been made which we append:

For the best display, in variety, to	
Wm. Cox, premium, - - -	\$8 00
2d best do., to H. Ives, prem., - -	6 00
A fine display to Wm. Evans, gratuity	3 00
do D. McGready, do - -	3 00
do Michael Rice, do - -	3 00
Best 12 ears sugar Corn, H. Ives, pr.	2 00
do field do. G. Sleath, gr.	2 00
2d do do R. M. Moore, gr.	1 00
A new variety sugar do., H. Ives, gr.	1 00
Best half peck Snap Beans, R. P. Resor, prem. - - -	2 00
Best display Sweet Potatos, in variety, Mr. Parker, prem. - -	2 00
2d best do. H. Ives, prem. - -	2 00
Best do. Potatos, in var. Wm. Cox, pr.	3 00
2d best do. G. Sleath, prem. - -	2 00
A display do. G. Swanson, gr. -	1 00
Best peck ash-leaf kidney do. H. Ives, gr. - - -	1 00
Best display of Tomatos, in variety, H. Ives, prem. - - -	2 00
2d best do., Wm. Cox, prem. - -	1 00
Muskmelon seedbasket, with 5 varieties Tomatos, Sarah Ives, gr. -	1 00
Best display of Egg Plants, Mr. Parker, diploma,	
Best 3 varieties of Squashes, 2 each, Wm. Cox, prem. - - -	2 00
Best two varieties of Pumpkins, 2 each, G. Sleath, prem. - -	2 00
Best display of Peppers, in varieties, G. Swanson, gr. - - -	1 00
Best Blood Beets, Dr. Brisbane, gr.	1 00
JNO. P. FOOTE, G. GRAHAM, } R. M. MOORE, W. COX, } Com. H. IVES,	

ON THE ASSIMILATION OF NITROGEN FROM THE AIR BY PLANTS, AND
THE INFLUENCE OF AMMONIA IN VEGETATION.

BY M. VILLE

MANY years ago, M. W. de Saussure remarked that a solution of Sulphate of Ammonia became, if exposed to the air for a sufficient length of time, converted into ammoniacal alum. This observation made in 1804, demonstrated the existence of ammonia in the atmosphere. Since the time of M. W. de Saussure, many chemists have endeavored to ascertain the quantity of ammonia that exists in the air by more expeditious and more exact methods. The importance attributed by Physiologists to ammoniacal compounds in the development of plants, was the cause of these endeavors made by the chemists. It is the general opinion that the source from which plants derive their nitrogen is ammonia, existing in the soil itself, or in the manure laid upon it, or in the atmosphere.

After having satisfied myself by a long series of experiments, made on much larger quantities of air than have been analyzed by my predecessors, that the quantity of ammonia in the atmosphere is scarcely appreciable, if pains be taken to avoid sources of error which may be caused by accidental emanations of the gas, I was led to doubt the reality of the influence attributed to ammonia in vegetation.

To clear up these doubts, I sowed a certain number of seeds in a mixture of equal quantities of white-sand and brick-dust, which had been previously calcined for many days, in a porcelain furnace, in order that all organic matter in them might be utterly destroyed. This mixture was placed in a certain number of pots, and to it was added five per cent. of ashes obtained by the combustion of the plants with the seeds of which I was experimenting. The pots were placed under a bell-glass, hermetically sealed. The air inside the glass was renewed every day, by means of a large expirator, (containing 613 litres at zero, under a pressure of 760). But as this quantity of air, though large, did not contain sufficient carbonic acid for the purpose of vegetation, five, and afterwards seven, per cent. of this gas was added by means of an apparatus from which the gas escaped bubble by bubble, during the

whole of the time occupied by the renewing of the air. The air which came out of the bell-glass was conducted into an apparatus in which all the ammonia present in the air was separated from it.

Thus two experiments went on at the same time; in the first, I dosed the ammonia with a certain quantity of pure air; and in the second, the ammonia with nearly an equal quantity of air, which had nourished the plants under the bell-glass. By comparing the result of these two analyses, I was enabled to see whether the ammonia of the air had taken any part in the development of the plants. On the other hand, by previously analyzing a certain number of seeds similar to those with which I was experimenting, I ascertained how much nitrogen was introduced under the bell-glass in the seeds. When the experiment is finished, I shall be able to ascertain by similar analysis, the quantity of nitrogen contained in the full-grown plants, and consequently the quantity of nitrogen assimilated during the experiment, and from that again, whether this nitrogen was derived from the ammonia or the nitrogen of the air. [This is an exact translation of the original, but the meaning is very obscure.]

Although the plants have not yet been taken out of the apparatus, the question may be considered as determined. It is quite clear that a certain quantity of nitrogen has been assimilated by the plants, and this nitrogen was derived from that of the air; for the plants under the glass have become developed in a remarkable degree, and the air in coming out of the bell-glass contains just as much ammonia as it did on its entry. Moreover, had the ammonia been wholly assimilated by the plants, this conclusion would not be invalidated, since the quantity of ammonia introduced by the air, during the four months the experiment has been going on, does not exceed .75 or 1.15 grains, a quantity too small to have had any considerable influence. So that the consequence to be deduced from the mere inspection of the bell-glass is that the nitrogen of the air has been directly assimilated by the plants, and

that the ammonia in the air has had no sensible influence. This being ascertained, I next proceeded to determine the influence that a given quantity of ammonia, added to the air, would in turn have on vegetation.

For this purpose I got more of the seeds on which the first experiment was made, and put them in pots under a bell-glass as before. The air inside of the glass was renewed, and five, and afterwards seven per cent. of carbonic acid was added as before. In short the only difference was that in this new experiment, a certain quantity of ammonia was daily introduced under the bell-glass.

From the very first day the influence of the addition was manifest. The leaves of the plants became tinged with a fresher and

brighter green; the stems ran higher, the branches more numerous had more leaves; all the plants, however, were not affected to the same degree—the greatest being observed in the cereals.

In pure air the cereals were sickly, blanched; their stems laid down instead of growing upright. In air containing ammonia, they were strong, straight and from their upright stems sprang numerous leaves. So that a second conclusion may be drawn from the mere inspection of the apparatus, viz: That ammonia is favorable to the development of plants, and more especially of that of cereals. *Compte Rendus.—Gardeners' Chronicle*

RIVERS' ORCHARD HOUSES.

A CERTAIN and inexpensive means of securing a crop of common fruit, considering the fickleness of our Spring, the universal loss of a considerable portion of all orchard crops by late frosts, especially in low, warm situations, and the slight amount of protection by which such consequences are to be averted. It must be owned that an intelligent, enterprising nation like this has been untrue to itself in not having sooner thought upon some simple means of security. No doubt the evils have been borne under the idea that they can only be averted by an expenditure which the value of the article, to be preserved, would not justify.

It must be admitted that there was much truth in this, so long as timber, glass and iron castings were dear, and more especially so long as no other mode of obtaining protection was known than the building of costly hot houses and green houses. But all this has ceased. Glass is among the cheapest materials. Timber has sunk to its lowest price; saw-mills have reduced the labor of its conversion to a comparatively inconsiderable sum; and iron castings may be had for five or six pounds a ton. With these materials skillfully applied, the expense of covering large areas becomes, in many cases, a prudent outlay, for markets must be had indeed if they will not yield a profit to the producer of crops under such glass roofs, as we are alluding to, after allowing an ample

margin for interest upon the expense of constructing them.

Mr. Rivers points out in what manner he would set about this, in a very useful pamphlet, which we advise everybody to purchase. Having been published for the purpose of aiding in the repairs of his dilapidated parish church, his little treatise has a claim upon the public, independent of its intrinsic horticultural worth, which is great. After pointing out the important fact that the mere covering a space of ground with a glass roof is sufficient, without fire heat, to produce in England the climate of central France, Mr. Rivers explains in what way he constructs—for he teaches what he has done, not what he thinks might be done—at a very small expense, the building to which he gives the name of an Orchard House.

"I have," he says, "a house thirty feet long, built as I have described, with a brick Arnatt's stove in the center of the back border, which is excavated for it to the level of the sunken path. Every thing thrives admirably. The borders are twelve inches deep, with lime rubbish mixed with a little manure. my forced strawberries, placed on the front border, near the glass, rooted in it and gave an abundance of excellent fruit. In like manner. Peaches, Grapes, Figs, Apricots, may be forced with but little trouble—in fact with pleasure and gratification. But in building these forcing Orchard Houses

the *constant* ventilation through the cracks of the boards must be avoided; they must be cased with asphalte felt, or, as bricks are cheap, the walls may be of brick, with the ventilating shutters in back and front. The forcing Orchard House I have alluded to above, is built with studs of Larch cut once down, and covered with half inch boards; these being nailed on, were well tarred with Stockholm tar, and the felt (McNeil's) then nailed on and done over twice or thrice with boiling coal tar, in which lime that had been slaked a fortnight, was mixed to the consistency of thick paint; this forms a shining imperishable mineral coat. I know of nothing equal to it for felt, clay, or lime walls or fences. My clay walls on some old buildings have, by repeatedly using it, become coated with stone. I have mentioned that bricks may be used; but, although I have many plant houses built with bricks, I have not employed them for building Orchard Houses, or even Houses for forcing Roses, &c. My preference for boards and felt, for forcing houses may be owing to imagination; but I may as well state *why* I have and do prefer them: It is because I have found them fiercely hot during the day, even in moderate sunshine, the evil effects of which are easily modified by abundant ventilation, and agreeably cool during the night, without that stifling atmosphere peculiar to houses with brick walls, only because bricks give out heat for many hours after sun set. Now, in thus rapidly cooling down, I have found they approximate to the descriptions given of the climate of the East, the birth place of all our choice fruits; accordingly my Peaches, Nectarine, Grapes and Figs have grown and do grow with as little trouble as I can wish them, in houses with walls of half-inch boards and felt. But I ought not to omit mentioning here an additional reason, for my opinion that fierce sun light through large pieces of glass and abundant ventilation, will give us the climate of continental Europe. I have an Orchard House ninety feet long, twelve feet wide, rafters four inches by two, and fourteen feet long, the back wall of which is a fine beech hedge twenty years old, eight feet high, one and a half thick: The front, half-inch boards: The board next the glass, fifteen inches wide, is on hinges and is always open in warm weather; this house is glazed with sixteen ounce sheet glass, twenty inches

by twelve, placed cross-wise, so that the rafters are twenty inches apart; the glass is foreign, of the cheapest description, and cost 2½d per foot. Under ordinary circumstances, I should have much trouble with scorching, as it is very irregular, and many foci are formed; but the gentle percolation of the air through the hedge is so constant and so regular, that not a scorched leaf is to be found in this Orchard House, in which are about seven hundred Peaches, Nectarines, Apricots, and Figs in pots, a few Pears full of fruit, a few Plums the same—every thing in perfect health—the shoots of the Peaches in particular are beautifully ripened. Now, what can tell more forcibly that scorching is the result of imperfect ventilation?

The cost of such a house may be judged of from the whole expense of one twenty feet long, twelve feet six inches wide, two feet nine inches high in front, and seven feet six inches at the back, being 17l. 8s. 9d., or less than 1s. 6d., (33 cents) per foot, superficial of the area covered. The pamphlet contains a plan of such a house, and a detailed statement of the manner in which the cost is made out.

Within houses of this kind, Mr. Rivers grows, with great success, Apricots, Peaches and Nectarines, Plums, Cherries, Figs, Pears, Grapes, Apples, Strawberries, etc., all in pots, by a system of management fully and carefully described in his pages. We say in pots, because it is important to bear in mind that in places of such small dimensions, fruit trees must necessarily out grow the space allotted to them, unless their roots are confined in pots. His experience has told him, that if planted in the ground "they can not be kept under control even with annual root-pruning. I have some Peach trees which have been planted in the raised borders of one of my Orchard Houses, four years; they bear admirably, but in spite of root-pruning they will grow too rapidly. Now in pots, the size and growth of the tree may be regulated with the greatest nicety; the annual root-pruning can be done with much facility, and there is no occasion to dig and disturb the borders, which must be done to a great extent, to root prune properly trees planted in them. In fine, as far as my experience has gone, I can imagine nothing so eligible as pots, or vases, for fruit trees in Orchard Houses, or fruit conservatories."

But although this is true in small places, it would by no means apply to "Victoria Houses," under which ventilation being provided, cultivation would go on exactly as it does in the open ground; and all the trouble and expense of pots be saved. We see no reason whatever, why many of the walled in squares of the kitchen gardens attached to country residences, should not be covered with glass; the walls remaining as they are. In that way the great expense of side enclosures would be saved and it would become possible to rely upon the certainty of many crops which are now almost the result of chance. Winter Lettuces ought to grow there, as they now grow in Summer; early

Peas and Beans would beat those now poured into our markets from the South; Manchester would have the climate of Penzance, and Isleworth of Jersey; and, for any thing we see to the contrary, the differences of climate between Provence and Middlesex would cease to exist. The whole difficulty consists in ventilation, that is to say, in maintaining beneath the glass roofs such a motion in the air as would resemble that to which plants are naturally exposed. Such a movement of the atmosphere is indispensable; and we shall be greatly surprised if the engineers of this country do not provide it in a manner to leave nothing to be desired.—*Gardener's Chronicle.*

WINTER RHUBARB AND SEAKALE.

WINTER RHUBARB, when produced in perfection, is a delicacy which most people enjoy; much, however, of that which is forced for Covent Garden Market, under the influence of strong fermenting beds of stable litter, is anything but finely flavored. A strong taste of the fermenting material is obviously perceptible to the palate. The obtaining the fine taste which distinguishes clean forced Rhubarb from that just alluded to, is a thing which eminently deserves the attention of all who cultivate what is required for their own private use.

To produce Rhubarb in perfection, a deep, rich, loamy soil is to be preferred. The ground should be well and deeply trenched, and the plants put out in March. The system of planting should be in rows, at least four feet apart, and the plants should be placed three feet from each other in the rows. An early variety should be preferred for forcing. I have proved Wilmot's Early, or Mitchell's Royal Albert, to be excellent kinds for winter use, and, if the soil is in high tilth, one season will produce them sufficiently strong for the purpose. The roots should be carefully taken up; the less injury inflicted upon them in this operation, the better; therefore a deep trench should be first taken out, all around each crown, and the roots carefully undermined. I have for some years had an ample and regular supply. the produce of a few roots placed under the front stage of an intermediate house. They are placed close to each other, and merely

covered with a little light, dry soil, no other care being requisite. The first planting takes place in November, and this is succeeded by a second in February. These two plantings usually afford sufficient for a small family, and in the highest perfection, with the least possible trouble.

Seakale is also grown in a similar manner, but requires a deeper covering, in order that the stocks may be blanched. The importance of such places is not sufficiently appreciated. If fully taken advantage of, a regular supply of Salads, Mushrooms, etc., might be kept up throughout the winter and spring months at little trouble or expense. The space under a plant stage can be of little other use, and if thus taken advantage of, it is quite astonishing what positive luxuries may be raised there. I always look upon the under part of my stages as being, during winter, quite as important as the top. Now, such places are usually either left unoccupied, or kept as a kind of rubbish hole; whereas, at the present time all behind my hot-water pipes are raising quantities of Seakale and Rhubarb which generally maintain a supply until it comes naturally. I never force either of the above in the open air under dung covering, having an impression that flavor is thereby very much deteriorated. Seakale, if covered with dry sand about a foot, and allowed to grow with the natural season, will always be infinitely superior to that produced under the steaming influence of stable dung.—*Gardeners' Chronicle.*

GOOD TASTE IN CEMETERIES.

MOUNT HOPE CEMETERY AT ROCHESTER, N. Y.—ALLEGHENY CEMETERY.

It has been said that in no way can we more show respect to the memory of our dead, than in the selection of suitable grounds for their burial. The public taste for natural and secluded spots, where the forest shade and a retreat from the active scenes of life, harmonize with the feelings of the living, as they go up to commune with the dead, has of late years prevailed over the length and breadth of our land. Mount Hope, which lies in the south part of the city, on the east side of the Genessee river, was selected some fifteen years since, by the citizens of Rochester, and consecrated as a public cemetery. At first it was composed of some sixty acres of land, since which forty acres more have been added.

From time to time, different sections have been laid out into lots, and great care taken to reserve the forest trees which abound all over the grounds. The sections are laid out with taste, and roads are made so that all parts are accessible.

Leaving the entrance, different pathways lead to what is known as the pinnacle, an elevated spot, commanding a fine view of the country for miles around, Lake Ontario, the Genessee River and the City, of nearly forty thousand inhabitants.

There are three natural ravines, or hollowed places, down which the surface water, from rains, is carried; the ground at the bottom is so porous that the water disappears at once. They are aptly called tunnels, or funnels, "sink holes," and are a curiosity.

The forest trees are of various kinds; the Beech, Maple, Oak, Chestnut and Sassafras, abound, and wild flowers and shrubs grow in all their native beauty. It is a fine field for the lover of nature and a botanist, who may be truly called such.

In this sacred spot, affection has raised many a token of remembrance commemorative of the dead, while the heart's best feelings are manifested by the evergreens and summer blooming plants and shrubs which have been placed with gentle hands round the graves of the dearly and tenderly loved ones. Instead of being a neglected spot, Mount Hope is kept in fine order by the authorities and is frequented by the citizens, it being a pleasant ride or walk of a mile or more from the center of the city. All strangers should visit it. The avenue thither is well planted with trees, and two of our most extensive nurseries on the roadside abound with young and thrifty trees and shrubs, which may be seen in passing and add a pleasure to the walk.

Mount Hope is an interesting spot and a day can be well spent in traversing the grounds. I will mention one monument erected to the memory of the late Mr. Wally, whose whole heart and soul was alive in good wishes for his fellow man. He was extensively known as a generous advocate of the peoples' rights. In regard to embellishments of public burial grounds, I send you an article, written by Rev. Geo. E. Ellis, which is well worthy of publication, connected with this subject.

Your's truly, J. H. WATTS.

THE ideal of an appropriate resting place for the dead is not difficult to define to the mind, nor to realize by the wise use of the means which we have at our service. A pure taste, a healthful sentiment, an instructed mind, a skilful hand, may plan and execute. Such an ideal will exclude and admit certain features, emblems, decorations, and details, according to rules which carry with them their own warrant, or are readily approved when weighed and considered.

The first aim should be to exclude all garish tokens of display and vanity, all theatrical embellishments, all excesses of mere sentiment, all coarse and repulsive emblems of the mere materialism of death. Though we say that the grave equalizes all mortal distinctions, we do not say so truly. Some signs of the distinctions and rivalries of life will find expression here; and it can not be otherwise, where wealth and poverty shall have their graves. Such distinctions, so far as they arise from eminent excellencies of character, or honorable fidelity in discharging the higher trusts of existence, ought to be recognized here; for they are part of the wisdom of the grave. 'Good taste—yes, some thing more simple than that—will forbid the obtrusion here of all eccentricities, all that is barbarous in the shapings of the monumental structure, or boastful or ill-toned in the inscription which it may bear. Death needs no artificial skill, no ingenuity, no conceit, no parade, to invest it with effect. All such exhibitions will but detract from its solemnity.

And, even as to epitaphs, there are some suggestions which may be spoken in a still, tenantless cemetery, better than where in single instances good taste may have been violated. Flattering titles, superlative praise, and even some expressions of grief or hope, do not become the monuments of the dead. In the sacred privacy of a saddened home, a father or a mother may be spoken of as "the very best of parents." Brother, sister, or friend may there be extolled as excelling all others, known to the fond household circle, in purity, goodness, or fidelity. But, if the superlatives and encomiums which express these domestic partialities are inscribed upon stone and obtruded upon strangers, they may not always awake the right emotion. So also, when those who have not lived or died in the esteem or good report of

their associates are committed to the earth, near affection may have treasured some remembrances of kindness, some good intent, some struggling effort, even in them; and the softened hearts of the mourning may prompt an epitaph—as often an obituary—which will not harmonize with general repute nor with the grounds of Christian hope. Modest silence is better then, than the ventures of charity, or the prominent suggestion of the large compass of the Divine mercy. The great hope of affection may be as strong, if held within the heart, as if it were chiselled out in marble. The philosopher Plato restricted the longest epitaph to four verses, and suggested that the poorest soil was most meet for human burials. We may approve his former counsel rather than the latter. The epitaph of the emperor Adrian's horse is preserved; but his own has perished—not, we may surmise, because of its modesty or its justice.

The rules of exclusion, which good taste and the harmonies of propriety and consistency will enforce in such a cemetery, will not trespass upon the large liberty which individual preferences may exercise for variety. Variety will be desirable here as elsewhere. The colors of the stone from which monuments are hewn, are various; so may be their shapes, and the emblems which they bear. Flowers and trees are diversely fashioned, robed and dyed; so may be their groupings and effects. The slender or the solid structure, the broken shaft, the consecrated cross, the simple headstone, the single memorial of a whole household, with the record-page of the family Bible transcribed upon it, the urn, the vase, the withering flower, the chrysalis, the inverted torch, the winged globe, the serpent, coiled into a circle—the ancient emblem of unending time—these do not exhaust variety, though they express so much. It is, however, to be remembered

here, that the effort after singularity or novelty, whether shown in dress or manners or literature, or scientific or philosophical or religious speculations, most frequently fails, and in matters of taste produces the most tasteless results.

ALLEGHENY CEMETERY.

My excellent friend Earl, of the *Massillon News*, has thrown the ensuing page before us, and it is cheerfully reproduced in this connection:

The following which we copy from the *Pittsburgh Gazette*, corresponds so well with our ideas of true taste, that we commend it to the careful and attentive perusal of all who feel an interest in a spot which is, (or should be) so dear to every heart. We all have friends and connections whom we love, and whom we must sooner or later see depart from the busy scenes of earth to take their destined positions in the spirit world. We therefore feel a natural inclination to adorn and beautify the spot in which their corporeal remains are deposited, and so to weave around it charms that shall ever be calling us to its sacred and hallowed precincts, to drop a tear to the memory of the loved and the lost ones—of those whom in life we loved—who in death we deplore.

In regard to our own cemetery grounds, we can truly and justly quote the words of the *Gazette*, as spoken in reference to Allegheny Cemetery. "It is universally admitted by every intelligent stranger, that the natural state of the grounds is admirably adapted for the purpose designed, and that the artificial improvement under the direction of the accomplished Superintendent, has been in strict accordance with the natural indications of the location, governed by the acknowledged principles of taste."

It is therefore, to the matter of taste in improvements that we would especially call the attention of all concerned. We are happy to be able to say that thus far the departures from at least a reasonable exercise of taste are not numerous, and we trust that in future no more such will occur. It is true that there are more "white fences" around lots than we like, they are indicative

of any thing but genuine taste, and we hope if they are not disposed of before, that when "time shall have levelled them with the dust" they will be replaced by something more appropriate. But the article to which we allude covers the ground to such an extent as to render it useless for us to repeat or to take new positions upon the subject.

'TASTE.—A correspondent, under this head, makes some strictures in relation to the mode of improving and beautifying family lots in our incomparable Allegheny Cemetery. It is universally admitted by every intelligent stranger who has visited our Cemetery, that the natural state of the grounds is admirably adapted for the purposes designated, and that the artificial improvement under the direction of the accomplished Superintendent, has been in strict accordance with the natural indications of the location, governed by the acknowledged principles of taste. We have thus, by the harmonious combination of art and nature, secured a most lovely and appropriate resting place for the dead, and it would be a source of lasting regret, if any practice should obtain which would detract from that delicate sense of fitness, which true taste acknowledges, and thus mar the harmony of the scene. Our correspondent refers especially to one feature of improvement, which, it seems, has been lately developed—the painting of fences, enclosing lots, *white*. Every one, who has paid any attention to the harmonies of light, and shade, and color, in a landscape, knows that any glaring color detracts from its beauty. The contrast is abrupt, unnatural and incongruous. We know that white is a popular color in American ideas of beauty, particularly for suburban residences and country cottages, but we know, also, that it is repulsive to men of cultivated minds, and that it is condemned by all standard writers on the principles of taste, as applied to the color of houses, fences, etc., in landscape scenes. If an artist should place in a landscape, however exquisitely painted in other respects, one of our favorite American cottages painted white, and a fence of the same color, we should start with horror and cry out, "what a daub!" Public taste is not sufficiently perverted for this, because painters, who study the principles of taste, as well as mostly possess an innate perception of the

fitness of things in colors, have cultivated the public mind by guarding their productions from such flagrant faults. What is a painting but a reproduction of nature on canvass?

If it accords with the principles of taste to paint a house or fence white, it would equal accord with them to place them in the picture. Besides, the painting of a fence white, in a Cemetery, is incongruous in another particular. The fence is not the important object in the landscape, but the custom or necessity, to be kept as much out of sight as possible. The monument, the grave, the trees and flowers—testimonials to departed worth, and of our love and veneration for our deceased friends—these are the prominent and natural objects we expect to find in the place of sepulchre. The white fence stares us in the face, it intrudes itself upon us uninvited, and where it is not wanted. It speaks of exclusiveness, of partitions among men even in the grave, and by its

want of congruity with the surrounding landscape, mars the general harmony of the scene. Who is there that has not felt pained at witnessing in our country grave-yards, high white paled fences, tipped of at the top with black, enclosing a small family lot. The objection to the same practice in the Cemetery, is not lessened by the superior neatness of the fence, as the departure from correct taste is only rendered thus more unlooked for and more prominent. Where a fence is considered necessary, it should be painted with some neutral tint, harmonizing with the landscape, and rendered as unobtrusive as possible.

In reference to the sameness of design exhibited in monuments, we have but little hope of being able to correct the evil. Men are afraid to step out of the beaten track. They build their houses alike, and follow a routine plan in nearly every thing, for fear of the vulgar prejudice against singularity.

KOHL-RUBI.

So many have been the applications we have recently received for information relative to the *Knol-Kohl*, or *Kohl-rubi*, that we have taking some pains to gain information we can rely upon relative to this very desirable vegetable; but before we give the result of our information, we will insert this extract from the letter of a Jersey correspondent; because the evidence it contains from General Le Couteur, sustains that which we have gathered from elsewhere:—

“A field officer, a most accurate observer to whom Jersey is indebted much for its marked advance of late years, mentioned to me that he has found the *Knol Kohl* one of the most productive crops which he has yet tried. He considers the flesh more solid than, and that the size is nearly equal to, the Swede turnip; while it resembles the cabbage in appearance, and improves in growth by transplantation. But the really superior point in his estimation is, that it communicates no flavor to the milk or butter of cows fed upon it. This last quality would render it second only to the parsnip; but I confess the well known composition of the *Cruciferae* makes

me skeptical of their enjoying such an immunity.

The General, however, is very anxious to have your opinion on the subject, and the benefit of either your own experience, or that of some of your truly scientific correspondents, from whom we so often get valuable hints, the result of observation and reflection, not the mere chronicle of some lucky accident.”

The *Knol-Kohl* or *Kohl-rubi* of the Germans, is the *Brassicacanto-rapa* of botanists, the turnip stemmed cabbage of the English, and the *Chou-rave* of the French. It is sometimes called the Cape Cabbage. The stem is thick, rises about eight inches out of the ground, is swollen into a globular form very like a large Swedish turnip growing above ground, and is covered with leaves, slightly scolloped on the ends, undulated, and milky green, like those of the turnip we have mentioned. There are several varieties of it, and some one or other of them is very common in the north of Europe, especially in the cottage-gardens of Poland and Sweden; but the green-stemmed and purple-stemmed

(especially the latter) are to be preferred. The summary of the highly satisfactory testimony we have received is in its favor, and is the following:—It is sweeter, more nutritious, and more solid than either the cabbage or white turnip; it will produce a greater weight per acre than the turnip, and prefers a heavier soil than that root; is harder and keeps better than any other bulb; and imparts very little of that flavor either to milk or butter known as *turnipy* and so objectionable to all palates. So much relished is it both by cows and sheep, that they will leave either turnips or cabbage to partake of it. Hares and rabbits are so fond of it, that where they abound Knol-Kohl can scarcely be grown. It deserves remark, also, that cattle eat the leaves more readily than they do those of the turnip, and they are less bitter.

The mode of culture usually pursued is to sow them in the first week of March, and the plants are put out in June in rows four feet apart, if the soil is fertile, but only three feet if the soil is less productive, and three feet from plant to plant in the rows. The plants must have the chief part of their stems left uncovered by the soil. Two pounds of seed produce enough plants for an acre. It is an excellent crop for cleansing the soil, as the width between the rows enables the hoe to be effectually used, and during a lengthened period. When plants wither they may be filled up from the seed bed with fresh plants.

The produce is from eighteen to twenty tons and upwards, per acre; the bulbs may be kept sound and nutritious until very late in the spring, even much later than the Swedish turnip. When given to cows it promotes the secretion of milk, and sheep fatten upon it rapidly.

We consider the Knol-Kohl a very valuable crop, both to the farmer and allotment tenant, who has either a cow or a pig; for the latter thrives very well upon it, especially when boiled. But it is also used as a dinner vegetable, being peeled, quartered, and served up with a white sauce like the Jerusalem artichoke. The young sprouts are very good also in spring, especially if forced and blanched early. For household use, a second sowing should be made at the end of August, the young plants to stand the winter, and to produce bulbs for use in the spring.—*Cottage Gardener*.

This vegetable is cultivated to some extent by the market gardeners about our city, but its merits are not sufficiently appreciated by the public, most of whom think it only an ingredient in soups. Let us hope that some one will present a sample with description of its culture, to the Ohio State Fair, to be held at Cleveland next year, so that its good qualities as a root crop for stock may be brought into notice.—*Ed. Review*.

LENGTH OF FIBROUS ROOTS OF ANNUALS.

I WAS invited a short time since by a gentleman of this town to inspect the roots of a plant of Mignonette, which had penetrated through several courses of bricks, and descended into a wine cellar. Over the cellar which was outside of the dwelling house, was a brick pavement, between the joints of which Mignonette seed had been sown from year to year. At the extreme end a small portion of soil was allowed, and here a plant or two grew more vigorously than the rest, though not so luxuriantly as is often found in a common border.

The roots of these plants had penetrated through eighteen inches of brickwork, and some of them were hanging inside the arched

roof, nourished by the damp atmosphere only. A few more favorably situated, were attached to the end wall of the cellar, and had descended five feet five inches down the wall into decaying saw-dust of the wine bin. Others were beautifully spread over the wall, with a thousand ramifying rootlets, bespangled with minute crystal-like damp drops, and extending over a space of five feet in width. It was difficult to trace the brittle roots that had penetrated the saw-dust, but I measured some upwards of seven feet below the surface of the brickwork on which the plants were growing. CAREY TYSO,

Florist, Wallingford.

Gard. Chronicle.

THE USE OF FLOWERS.

BY MARY HOWITT.

God might have bade the earth bring forth
Enough for great and small—
The oak tree and the cedar tree,
Without a flower at all.

He might have made enough, enough
For every want of ours—
For luxury, medicine, and toil,
And yet have made no flowers.

The ore within the mountain-mine
Requireth none to grow;
Nor doth it need the lotus-flower
To make the river flow.

The clouds might give abundant rain—
The nightly dews might fall—
And the herb that keepeth life in man
Might yet have drunk them all.

Then wherefore, wherefore were they made,
All dyed with rainbow-light;
All fashioned with supremest grace,
Upspringing day and night:

Springing in valleys green and low,
And on the mountains high,
And in the silent wilderness,
Where no man passeth by?

Our outward life requires them not—
Then wherefore had they birth?
To minister delight to man—
To beautify the earth;

To comfort man—to whisper hope,
Whene'er his faith is dim;
For whose careth for the flowers,
Will much more care for him.

LEAVES FALLING.

SOME persons may think this extract rather fanciful, to me it is full of interest and serves to show how differently we may all view the same event, and how happily some may trace precepts of wisdom in the falling leaves; "sermons in stones and good in everything." The *Genius of Liberty*, is a new periodical conducted by females; it is highly recommended by the press, and if this be a fair sample of its fiber it may well be praised.—ED. REVIEW.

In the evening of Autumn, from the snow banks of the North and the caves of Boreas, issues the spirit of silver fringed Frost; he crosses the chain of lakes and invades the fair fields of the South. He has already made his appearance, and with his invisible lancets has commenced the immense labor of cutting off every leaf and pedicle from our forest, road, side walk, garden trees, shrubs and flowers. And his mischievous blades have already made Nature like a flock of half picked geese.

While passing through the city on the morning of the 27th ultimo, we saw him at

work armed with all the power of scissordom, constructing out of the foliage and drapery of the Catalpa and the Ailanthus, a leafy blanket for earth and a bed for the weary and houseless. To see these fragments of summer falling in such rich profusion, and cast by an imperceptible hand from their ornamental position to the cold pavement, for a moment disposed us to censure the unseen One; we instinctively reproached him for his spoiling mission and ordered him to leave off shearing nature of her fleece, to flee back to the icy North, and never again to touch the green flags and banners of summer. In one night and morning the covering of the Catalpa and Ailanthus was felled to the ground; the like might be seen by our garments suddenly dropping from our bodies and falling beneath our feet. Such a hasty fall of the leaf, I never witnessed before, and the bald limbs of the Ailanthus reminded us of amputated toes, fingers and arms.

Notwithstanding he flourishes his knives, and will actually excise every leaf and leaf-stock of nature, there is something healing and restorative in his blades, for on close inspection I find no bleeding, nor even open, unhealing incisions, but they are all instantly closed, as if by a miracle, and, buds of pro-

mise are in formation by the side of the wounds; the receptacle of the leaf-stock is nicely overlaid by a new bark that safely protects the tree or shrub from the mildest or the severest shafts of the North. And I was led to think that this visitor from the land of wind and ice was not the evil genius some suppose, but possibly a kind servant of nature, sent to prepare her a couch, to make

ready a place of repose and allow her with all her forces and activities to slumber for a season, until her spring comes, warmed by the returning sun, animated with youth restored, clothed again with garments tinged with richest dyes, decorated with opening flowers, fed with fragrance, fanned by the mild serene zephyrs of the South, and moistened with the dews of heaven.

From "Adirondack," by J. T. Headley.

AUTUMN A PAINTER—MANNER OF WORKING.

"Leaves have their time to fall,
And flowers to wither at the North wind's breath."

No country can compare with ours in the richness, at least, of its *Autumn* scenery. The mountains of the eastern world are not wooded like ours, and hence can not exhibit such a mass of foliage as they present. But if you wish to behold autumn in its glory, you must stand on some height that overlooks this vast wilderness; what seemed to you in summer an interminable sea of green, becomes a limitless expanse of the richest colors—a vast collection of fragmentary rainbows. And the different effects of *light* on different portions is most astonishing. Here a mountain blazes in splendor, and there a valley looks like a kaleidoscope—just so variegated and confused.

Autumn has been written and rhymed about, from the days of Thompson down, but always in the same general tone of sadness. The text of every one has been—

"The melancholy days have come,
The saddest of the year."

There must be something natural in this, or it would not be so universal; and my own experience has heretofore corresponded with this prevailing sentiment. Indeed, the effect of the dying year is palpable on those least affected by such changes, and least conscious of them. You notice it in the very sports of children. In spring time the most vigorous games and boisterous merriment are seen on every village green; but in autumn these are thrown aside, for forest strolls or walks by the river. The scene subdues and chastens the very spirit of childhood; and there is something sad in seeing the glorious summer, that has been so full of life, and health, and

beauty, lie down and die on the bosom of Nature. Hope, which comes with Spring, yields in Autumn to reflection, and man looks forward to decay rather than to maturity and strength. But this feeling becomes sadder and deeper as one enters the forest, and hears the leaves rustling to his tread, and the sound of the squirrel as he gathers nuts amid the tree-tops.

The trees have a melancholy aspect about them—they appear to be conscious that their glory is departing; and every leaf, as it loosens itself from the stem where it has nodded and swayed the livelong summer in joy, and flutters to the earth, seems to lie down as a sad memorial of the departing year.

But for once in autumn I have had none of these feelings. Roaming through this glorious region, and along the foot of these mountains, I have seen summer die as I never saw it die before. There has been a beauty and brightness and glory about the changing foliage this year, I never before witnessed. No drenching rains faded the foliage before their time, and amid the clear weather, and slight frosts, the summer has died like the dolphin, changing from beauty to beauty; and autumn, the usually sad, sober, serious autumn, has seemed the most frolicsome fellow of all the year. Stand in one of these deep valleys, and look around you on the shores and hill-slopes and mountain ridges. Autumn, with his brush and colors, has been painting with the most reckless prodigality, and in endless variety of beauty and brightness. There is no end to his whims and conceits—the changed landscape seems the work of one in his most joyous, frolicsome mood. There stands a single maple tree; Autumn approached it last night, and appa-

rently from a mere whim, threw his brush over the top, making it a scarlet red one-third of the way down, while the other portion he left green as in its spring time. On another, he has run his brush along a single limb, which flashes out from the deep bosom of green in singular contrast. Yonder is an open grove which he has hurried through, touching here and there a tree with his reckless brush, till it is spotted up with all the colors of the rainbow. He has painted one all yellow, another all red, a third left untouched, and a fourth sprinkled over with a shower of colors, as if he had simply shaken his brush over it in mirth.

He has brought out colors where you never discovered any thing but barrenness before. A yellow wreath is running along a rock and festooning a tree, where yesterday was only an humble unseen vine. He has painted it in a single night. He has trod the gloomy swamp also, and lit up its solemn arcades with brightness and beauty. The bushes that lifted themselves modestly beside the dark fir trees, unnoticed before, he has touched with his pencil; while the evergreens, which he always avoids, stand in their native greenness—and lo, a yellow lake is spread under their somber tops, as if a flood of molten gold had suddenly been poured through them. He has tipped the bush that dips the water, with his pencil, and lo, the liquid mirror blushes with the reflection at morning. Like a giant he has stood at the base of the sky-seeking mountain, and swept his brush with a bold stroke all over its forest-covered sides,

till it fairly dazzles the eye as the evening sunbeams flood it. There, where the ridges stoop into a long steady slope, he has wrought on a grander scale. The different nature of the soil has given birth to several varieties of timber, which lie like so many separate strata for miles along the mountain side; and here he has swept his brush in long stripes of yellow and red and green and gold, till acres on acres of carpeting spread away on the vision, while here and there separate clumps of trees have been touched with variegated hues, to serve as figures in the magnificent groundwork.

It is astonishing how well Autumn understands the effect of light, especially as he works so much in the dark. But there, on the bold spur of that hill, right where the sunlight falls at evening through a gorge in the western range, he has laid on his richest and most gorgeous colors. And when the western sky is melting and flowing into fluid gold, and the glowing orb of day is swimming in its own splendor, as it sinks to rest, it pours its full brightness upon that already bright projection, till it is converted into a throne of light.

Thus does this frolicsome Autumn roam abroad, with brush and colors in hand, obeying no law but that of beauty. And while he paints on such a grand scale, and with such long sweeps, and so rapidly, too, finishing millions of acres in a single night, he omits none of the details. Each leaf is as carefully shaded, and as delicately touched, as if miniature painting were his only profession.

MR. SCHUMANN'S REPLY TO MR. BARNUM.

Mr. CHARLES SCHUMANN feeling himself aggrieved by the republication in the last month of Mr. BARNUM's remarks upon his products, requests that his reply may also have an insertion, which is granted with a distinct understanding that it is done for justice's sake, as the editor is a partisan of neither side of this question—not being an admirer of sweet Wine, nor exclusively devoted to the use of *eaux douces*.

Mr. SCHUMANN also asserts that his banter

to have his wine tested, has never been taken notice of by the great exponent of the total abstinence principles!

Cincinnati, April 30th, 1851.

MR. P. T. BARNUM, New York.

Your letter of the 18th inst., in answer to mine sent you through Mr. F. ECKSTEIN, jr. with one bottle of my sweet Catawba Wine, the pure juice of the Grape, has been received. I am sorry to learn by it that you are so ultra in the pure Water Principles as to be afraid

of hurting your conscience, even by the mere tasting of a beverage which was represented to you as the pure juice of the Grape, entirely free from intoxicating qualities.

Though I do not perceive how your argument in regard to the value of water can overbalance the value of my wine—originating from a fruit given to us by the same kind Heavenly Father—certainly not for the purpose of despising it, I do say that I am not in the habit of disregarding principles, even if they should be neither sound nor really pure. I will admit that your remarks about intemperance was not intended to be given with any reference to your indulging too much in pure water, neither at present, nor at the time when you had been a complete stranger in the temperance or pure water principles. I am also very willing to indulge you for your not being able to conceive how I could make my wine to keep sweet without mixing it with sugar or alcohol. This is certainly not a mere show matter, but one which requires

something more than that, and is sufficiently proved by the taste of the Wine, which is that of the grape itself.

The more important feature in your letter, however, is your serious doubt that my Wine is really the thing which I represent it. As this looks somewhat like an attack upon my character, I propose to you to fix upon a certain amount of money to be deposited in one of our Banks by both you and myself, to be drawn by him who will turn out right in the controversy. The experiment to be made at my residence near this city at the time of the next crop in October, in your own or in your Agent's presence.

This would be a good chance for both of us: either for you to make money out of me in a fair way, or *vice versa* as the case may be. Giving you this to reflect upon, and to resolve at an early day,

I remain Yours, Respectfully,

CHARLES A. SCHUMANN.

STEALING FRUIT.

"It is often a matter of surprise and regret that fruit should not be more cultivated among us in gardens of all sizes; but the indifferent common cherry is almost the only fruit tree found here in cottage gardens. Even the farmers neglect cherries, and plums and pears surprisingly.

"There is, unhappily, a very serious objection to cultivating fruit in our village gardens; fruit stealing is a common crime in this part of the world; and the standard of principle on such subjects is as low as it well can be in our rural communities. Property of this kind is almost without protection among us; there are laws on the subject, but these are never enforced, and of course people are not willing to throw away money and time, and thought to raise fruit for those who might easily raise it for themselves, if they would take the pains to do so. There can be no doubt that this state of things is a serious obstacle to the cultivation of choice fruits in

our villages; horticulture would be in a much higher condition here if it was not for this evil. But the impunity with which boys and men, too, are allowed to commit thefts of this kind, is really a painful picture, for it must inevitably lead to increase a spirit of dishonesty throughout the community.

"It is the same case with flowers. Many people seem to consider them as public property, though cultivated at private expense. It was but the other day that we saw a little girl, one of the village Sunday-scholars, moreover, put her hand within the railing of a garden, and break off several very fine plants, whose growth the owner had been watching with care and interest for many weeks, and which had just opened to reward his pains. Another of the same kind, but still more flagrant in degree, was observed a short time since; the offender was a full grown man, dressed in fine broadcloth to boot, and evidently a stranger; he passed before a

pretty yard, gay with flowers, and, unchecked by a single scruple of good manners or good morals, proceeded to make up a handsome bouquet, without so much as saying, by your leave, to the owner; having selected the flowers most to his fancy, he arranged them tastefully, and then walked off with a free and jaunty air and an expression of satisfaction and self complacency truly ridiculous under the circumstances. He had made up his nosegay with so much pains, eyed it so tenderly as he carried it before him, and moved along with such a very mincing and dainty manner that he was probably on his way to present himself with his trophy to his sweetheart; and we can only hope that he met with just such a reception as was deserved by a man who had been committing petty larceny. As if to make the chapter complete, the very same afternoon, the village being full of strangers, we saw several young girls, elegantly flounced, put their hands through the railing of another garden, facing the street, and help themselves in the same easy manner to their neighbor's prettiest flowers; what would they have thought if some one had stepped up with a pair of scissors and cut half a yard from the ribbon on their hats, merely because it was pretty, and one a had fancy to it? Neither the little girl nor the strangers in broadcloth and flounces seem to have learned at common school or at Sunday school or at home, that respect for the pleasure of others is simple good manners, regard for the rights of others, is common honesty.

"No one who had a flower border of his own would be likely to offend in this way; he would not do so unwittingly, at least; and if guilty of such an act, it would be premeditated pilfering. When people take pains to cultivate fruits and flowers themselves, they have some idea of their value, which can only be justly measured by the owner's regard for them. And then, moreover, gardening is a civilizing and improving occupation in itself; its influences are all beneficial; it usually makes people more industrious and more amiable. Persuade a careless indolent man to take an interest in his garden, and his reformation has begun. Let an idle woman honestly watch over her flower-beds, and she will naturally become more active. There is always work to be done in a garden, some little job to be added to yesterday's task, without which it is incomplete: books may

be closed with a mark where one left off, needlework may be thrown aside and resumed again; a sketch may be left half finished, a piece of music half practised; even attention to household matters may relax in some measure for a while; but regularity and method are constantly required, are absolutely indispensable, to the well-being of a garden. The occupation itself is so engaging that one commences readily, and the interest increases so naturally that no great share of perseverance is needed to continue the employment, and thus labor becomes a pleasure and the dangerous habit of idleness is checked. Of all faults of character, there is not one, perhaps, depending so entirely upon habit as indolence; and nowhere can one learn a lesson of order and diligence more prettily and more pleasantly than from a flower garden.

"But another common instance of the good effect of gardening may be mentioned; it naturally inclines one to be open-handed.—The beautiful returns which are bestowed, year after year, upon our humble labors, shame us into liberality. Among all the misers who lived on earth, probably few have been gardeners. Some cross-grained churl may set out, with a determination to be niggardly with the fruits and flowers of his portion; but gradually his feelings soften, his views change, and, before he has housed the fruit of many summers, he sees that these good things are but the free gifts of Providence to himself, and he learns at last that it is a pleasure as well as a duty to give. This head of cabbage shall be sent to a poor neighbor; that basket of refreshing fruit is reserved for the sick; he has pretty nosegays for his female friends; he has apples or peaches for little people; nay, perhaps in the course of years, he at length achieves the highest act of generosity—he bestows on some friendly rival a portion of his rarest seed, a shoot from his most precious shoot.—Such deeds are done by gardeners.—*Rural Hours.*

HOW TO SMOKE A GREEN-HOUSE EFFECTUALLY.—Take a sheet of touch paper, spread it out, and roll half an ounce or one ounce of tobacco up in it, light it at both ends, put it into the house, leave it there, remain outside with your hands in your pockets, and the job is done. In the morning all the green flies will be dead.—*Gard. Chron.*

FRUIT CULTURE IN THE UNITED STATES.

IN regard to fruit culture, our advantages are still greater. An orchard of fruit trees in this country, even when well attended, does not require as much care and labor in five years as it does in one in the greater portion of Europe. A single peach tree in England or France receives more actual hard labor in one season, than an orchard of one hundred trees in Western New York; and the price of a single fruit or at any rate half a dozen in the markets of London or Paris will buy a bushel in New York or Rochester. We complain of a curculio destroying our plums and apricots, and this is one of our greatest drawbacks here, but, notwithstanding, I have seen more plums and apricots on a single tree here since I returned than on any dozen I saw in England. We have the aphids on our cherry trees here, but they are easily destroyed. In both France and England I saw both orchards and nurseries of cherry trees almost ruined by them, and they were said to be unconquerable. We have fire blight and leaf blight here, and both are sad difficulties, but in France and England they are not without both these maladies. I saw apple trees very seriously affected in England with what we designate fire blight—the ends of the branches black and dead, and there, as here, the real cause is quite unknown to the most skillful cultivators. In France, I saw as bad cases of our leaf blight on the pear as I have ever seen in America. The ravages of birds in Europe are tremendous. It is almost impossible to save a crop of cherries. Nets, scarecrows, and a thousand expensive and troublesome devices are practiced, that in this country, where labor is dear, would not be attempted, even though the culture should be abandoned.

Fruit stealing has been supposed to be peculiarly an American vice, but it is not so

by any means, though, probably, quite as prevalent as elsewhere. In other countries, fruit gardens are better protected than in ours, and this gives them a greater degree of safety; but in France I saw several nurseries at some distance from houses, where the fruits were removed as soon as they appeared, to save the trees from being broken by the fruit stealers. If in America we were to apply ourselves to culture with the same regardlessness of labor that I have seen in Europe, we could produce results that we do not now dream of, and we will come to this by and by—we are every year approaching it nearer and nearer—our culture is becoming more skillful, more thorough, and more successful; but we have only made a beginning.

In horticulture as in agriculture, the United States of America has a great destiny to fulfil. Our territory is not only immense, but so diversified in soil and climate that all the most valuable grains and fruits can be produced in such abundance as will enable us to supply other countries less favored in these respects. The intimate connection now established between all parts of the world has removed the barriers which distance heretofore created, and we have now a clear course. Cultivators may redouble their energies with a sure prospect of reward, and if our government, in its wisdom, should see fit to lend a helping hand, all the better.—*Letters of P. Barry, (of Rochester, N. Y.)*

Now, then, who will not join us in the good cause, and plant fruit trees? The profits of the business have been pointed out, the pleasures of the pursuit may be imagined by any one who loves to watch the development of the buds, and flowers, and fruit, and Mr. Barry speaks advisedly when he sets forth the advantages this country presents for the pursuit.

ARCHITECTURE IN REPUBLICS.

BLACKWOOD'S Magazine is abusing republics because they do not erect such splendid specimens of architecture as monarchies do. It says that republics build nothing but prisons and workhouses, and that the United States with all her boasting has never built anything but a warehouse or a conventicle.

It is true that republics as a general rule do not build such costly and magnificent structures as some of the despotic governments of the old world have erected. For instance, the United States never built a pyramid like that of Cheops. The Egyptian monarchs, in erecting the pyramids, obelisks and temples which remain to inspire the traveler with wonder and amazement, wielded their sceptres over a nation of slaves. So also it will be found that in those nations and in those periods in which the most stupendous specimens of architecture have been given to the world, the people were most oppressed by the government. Whenever a despot erects a building at the expense of millions, the money is sure to come out of the pockets of his subjects. The rich are taxed and the poor are made poorer that some silly monarch may gratify his tastes by the erection of a superb monument of his power and his folly. The old world, where despotism has found a home for many centuries, is studded with buildings and ruins of buildings which in the general were erected by despots and paid for by those on whom their scepters rested oppressively.

But in republics the people are free, and rulers have no power to exact money of them for the gratification of a passion for architecture. It is true that in Athens the most magnificent public buildings that the world has ever seen were erected during the republic. But as a general rule the remark of Blackwood's Magazine to the effect that re-

publics do not indulge very extravagantly in architecture is true, and it is very honorable to them that it is true. It does not comport with the tastes of republicanism to have such superb structures, and the people do not acknowledge the right of their rulers to impose heavy taxes on them for any such purposes. Independently of our public buildings, which are in many instances highly creditable specimens of architecture, there are no buildings in the United States comparable to some of those which meet the eye of the traveler in the old world.

In the United States however there is one description of public buildings which one does not meet with in England. We allude to the school houses for the education of the people, which are to be found in several of the States of this Union, and which we hope will be found abundantly in all the States before the expiration of many years. These public buildings, though not very superb specimens of architecture, are nevertheless far more creditable to the tastes of the country than the palaces and old castles that frown from a thousand eminences in the different States of Europe. Let the inhabitants of Europe, whose ancestors have been oppressed for centuries to pay for the splendid buildings that are there to be seen, exult in the architecture. Their exultation is a far less noble feeling than that which a citizen of our republic feels when he points to the school-houses and churches in which the blessings of education and religion are dispensed freely to all.

The European, who glories in the great structures erected by despots at the expense of an unwilling and enslaved people, really glories in what we consider his shame. Had the people been less servile, monarchs would have been less munificent in the expenditure

of the national treasure in erecting splendid buildings.

While the public buildings of our republic and those houses in which people of distinction reside are less superb than the boasted structures of Europe, still we have the pleasing conviction that in the United States architectural taste is rapidly developing and the day is not far distant in which the houses in this country will be in all respects as tasteful as any that can be found elsewhere. They may not and perhaps will not be as rich and costly, but they will be quite as well adapted in all respects to the purposes for which they are designed. Beautiful private residences, in which every comfort that can make life desirable are to be found, are already in existence in every State of the

Union, and their number is continually and rapidly on the increase. As wealth and art advance—and they are sure to advance with accelerated pace in our country—more and more attention will be given to architecture, and the evidences of good architectural taste will be scattered over the country. We hope the day may not arrive when our people will be animated more by a desire for a mere show and display in their public and private buildings than by their fitness for the objects for which they are erected. The highest taste in building is that which adds nothing beyond what is amply necessary to the object had in view.

In a private residence, mere extraneous adornment displays gaudiness and not excellence of taste.—*Louisville Journal*.

From Downing's Horticulturist.

FIRST FLOWERING OF THE VICTORIA REGIA IN THE UNITED STATES.

[THE great event in our floricultural world just now is the blooming of the Victoria—that Queen of water Lilies—at the country residence of the President of the Pennsylvania Horticultural Society. Mr. Cope's zeal and spirit in the introduction and cultivation of this noble plant have been most satisfactorily rewarded by a larger growth, both of flower and leaf, than the most skillful culture in Europe has yet attained. We give his letter and the interesting account of his Lily below:—ED. HORT.]

A J. DOWNING, ESQ.—DEAR SIR: I am sorry that you were not here to witness the excitement which prevailed on the 21st ult., when the Victoria bloomed for the first time in this country, and when my grounds seemed to be in complete possession of the public. Since that event we have had a weekly contribution of a flower, the fourth one matur-

ing last evening. The interest felt by the public appears not only unabated but on the increase, so that on every show day we have crowds of visitors from all parts of the country.

I hope before long to send you a drawing of my Victoria house, which you request. In the mean time I send you a report from my gardener, which will be interesting to those who wish to look into the detail of the culture and treatment of the plant. If you deem any portion of it worthy of insertion in the Horticulturist you can make use of it.

The committee on plants and flowers of the Horticultural Society were present on the second flower blooming. They measured the petals, which they found seven inches in length, and the crown or disk of the flower three inches, thus making the diameter of the whole seventeen inches. This is three inches larger than any flower produced in

England. The leaves are also six inches larger than any grown there. The natural conditions of the plant in our country are, undoubtedly, more favorable than they can possibly be in England. There the water is at 85 deg. generally, and the atmosphere at 75 deg.; here it is just the reverse, which is undoubtedly more like its native country. I am satisfied that we have hit upon the method of cultivating the plant, and that both the flowers and the leaves are equal to any found either in a native or foreign state, in any part of the world. Although all this has been accomplished at a great expense of money and personal exertion, I do not regret what I have done. I think I have never been so richly repaid in a similar effort. Even Mr. Longworth, who regards so much of what is new in his favorite path, as humbug, says, in a letter which I received from him to-day, that "there is but one plant in the world—the Victoria." He adds, however, that he will present me with a fresh milch cow if he fails to grow the lily without heat. By this he means that he can grow it in his pond. Our plant is also grown without fire heat. We have had no fire since the 21st of June. The plant in the kitchen garden, which has had fire at no time, is very beau-

tiful, and would bloom, I think, if it had been planted a month earlier. As it is, I am not without hope that it will yet give us a flower. The leaves are within three inches, as large as the largest leaf spoken of by Bridges. Next season, if I live, I will show you a flower on the same spot, since you invite the effort.

The flower last evening was more gorgeous than any of its predecessors. As its conversion was going on, in its second stage, it seemed that pink or red hue greatly preponderated over the white. I cut the flower, placed it on a thin circular board, a foot in diameter, which it completely covered, and sent it to a wedding party. I am in hopes that one of the buds, now visible, will bloom in season for our annual exhibition, which is to be held next week. I shall send two of the leaves, one of them to be placed under side up, so that the beauty of its architectural structure may be seen.

The Victoria is one of the few things that has not been exaggerated; nor is it possible to exaggerate it. It is truly a wonderful plant.

Yours, very truly,

C. COPE.

Springbrook, near Philadelphia, }
Sept. 10th, 1851. }

WINE REPORT AT THE NEW YORK STATE FAIR, 1851.

THE Committee on Wines beg leave to report the result of their trial of the various native wines offered for examination. Of the several preparations from Elderberry, Currant, and Cherry, the Committee would remark, that, however agreeable or useful they may be for domestic use, they can hardly be ranked in competition with wines prepared from the grape.

No. 385—a bottle of currant wine, made in 1847, by Mrs. Updyke, was pronounced the best of the samples presented.

No. 204—also a currant wine, had a pleasant Malaga flavor.

No. 271—a white currant wine, had the taste of the Malaga wines.

No. 218—a domestic wine from the Clinton grape, was of fine color, and richly sugared. Sugar should be avoided, in the manufacture of all dry wines.

The Committee next proceeded to test, more critically, the various samples of light wines, sent from the Rhine of America, manufactured upon the banks of the Ohio

river, near Cincinnati. These wines are divided into four classes, No. 1 being the best; and the vintages of the same year put in competition with each other.

For the year 1850, there were the following samples :

Mr. Shaub's Dry Catawba, - Sour.

Mr. Sleath's " " - No. 1. Best.

Mr. Rehfuß's, " " - No. 2.

Mr. Brandt's, " " - No. 3.

1849—

Mr. Buchanan's Dry Cat'ba, No. 1. Best.

Corneau & Son's " " No. 2.

Mr. Ware's, " " No. 3.

1848—

Mr. Rintz's Dry Catawba, No. 1. Best.

Mr. Rehfuß's, " " (Sample 3) No. 2.

" " " " (Sample 2) No. 3.

Mr. Yeatman's " " (Sample 4) No. 4.

1845—

Mr. Rehfuß, one sample, a very delicate and excellent wine, - - No. 1.

Last, but not least, were two samples from Mr. Longworth—the Sparkling Isabella, and Sparkling Catawba. The first was pronounced the best, and very fine.—The second was also considered a very excellent quality of wine.

There was also presented by Mr. Sleath, a sample of fair quality of brandy, made from the native grape.

All the samples of wine marked No. 1, were very fruity, delicate, and well flavored, clear, and lively. Indeed Mr. Rintz's No. 1, 1848, and Mr. Rehfuß's No. 3, 1848, and No. 2, 1850, were of excellent quality and flavor.

Many others were also much admired. Mr. Brandt's No. 3, 1850, and Mr. Buchanan's No. 1, 1849, were very excellent wines; and Messrs. Corneau & Son's No. 2, of the same year, was also of fine quality. In Mr. Longworth's Sparkling Isabella, the Committee thought they could discover a slight taste of some other native grape, probably introduced to improve its flavor. The character of the Catawba grape being

superior to that of the Isabella, the Committee doubt not that experience and care in the manufacture of the Sparkling Catawba, will render it superior to the Isabella.

A bottle of Mr. Longworth's Sparkling Catawba was also tested and compared with a sample of the best Heidsieck, and pronounced to be very nearly equal to it.

Some remarks upon the soil adapted to the growth of the grape, and the manufacture of wine from it, with some statistics on the subject generally, contained in a letter from Mr. Rehfuß, of Cincinnati, who is engaged in the manufacture of wine, are appended as part of our report; furnishing, as they do, the best and most specific information on the subject to which they refer.

All which is respectfully submitted.

JOHN A. KING, *Chairman,*

JAMES WATSON WEBB,

LEWIS F. ALLEN,

JOHN A. WARDER,

SAMUEL MILLER.

G. W. HOLLEY, *Sec'y.*

This report has kindly been forwarded with the privilege of publishing it in advance of the next year's volume of the Transactions. For it my thanks and those of the contributors will be accorded to the very efficient and obliging Secretary of the State Agricultural Society of New York, B. P. Johnson, as well as to his amiable aid, who acted as amanuensis for the love he bears the West.

The report is much curtailed of its fair proportions, and 'reft of its *spirituel*, which, perhaps, smacked too much of the *fruity flavor of the wine*, and on serious reflection, the worthy Chairman thought best to present to the world simply the solid matters of fact, leaving behind all of the sparkling wit and *jeu d'esprit* of the racy report read upon the ground at Rochester, the effusions of the witty Secretary of our Committee.

Age before beauty, is a good maxim, and, even as republicans, we must submit with a good grace to the decisions of a KING.

CINCINNATI, September, 1851.

DR. J. A. WARDER:

Dear Sir—I hope you arrived safely in Rochester, and are fully engaged in examining the profusion of Fruits, the report of which I am very anxious to receive.

I send you, per L. & F. Express Line, freight paid, six bottles of my Catawba wine.

No. 1, 1845.—Specific gravity of the must, 1.078. This wine is over four years bottled; it kept very well; shows a little sediment, and crystals of cream of tartar. The year 1845 was not favorable to wine-raising.

No. 2, 1848. First run.—Specific gravity of the must, 1.095; specific gravity of the wine, 0.991. This wine will speak for itself.

No. 3, two bottles, 1848.—First run two parts, and one part pressed. Specific gravity of the must and wine, similar to No. 2. Of No. 3, I will have 3,000 to 3,500 bottles ready for shipping this fall. The price here is \$6 50 per dozen, packed up in boxes.

No. 4, 1848.—From Kentucky. Similar to the wines above; specific gravity of the must, about 10 degrees lower than on our side of the river.

No. 5, 1850.—Specific gravity of the must, 1 080; a wine, when cellar-ripe, in about two years, will have a fine bouquet, free from malic acid, and less of tartaric acid. I mixed the soil with silicious potassa early in the spring; the roots found the necessary quantity of potassa in the soil to form bitartrate of potassa, or cream of tartar; the free malic and citric acid was converted into tartaric, and a more full maturity of the grapes was brought on. The bitartrate of potassa is mostly all precipitated after the first fermentation. The strewing of wood ashes will have the same effect as silicious potassa.

The raising of vines and making of wine is mostly in the hands of Germans here. They have adopted the same mode of training and fermentation as is practiced in the southern part of Germany, in the Rhenish country, as the climates are nearly equal; but our Catawba wants less trimming.

The people here, not acquainted with, nor accuscustomed to, Rhedish wines, and who were using highly-branded, and very seldom properly fermented wines, as Madeira, Port, Malaga and Sherry, judged our wines, at first, to be hard and weak, or called it pleasant cider. But there are thousands now who appreciate the bouquet of a pure Catawba wine, when of proper age, the grapes cut when fully matured, and fermented in good cellars and proper barrels.

The physicians have already detected its restorative properties, and advise it for convalescents.

By my experiments, during a period of six years, I am convinced that our climate is fully adapted to the raising of wines. By comparing the specific gravity, or the quantity of sugar in our Catawba must, with the must of the grapes in Europe, since 1844, our Catawba must is found to exceed European, mostly more than 10 degrees. Besides this, we never, even in our worst years, will have a wine below the medium of Europe, and of less failure than there.

Respectfully,

L. REHFUSS.

NOTE—I regret that this letter did not reach the Committee until after they had held their examination, for their testimony as to the effect of a scientific application of a special manure, as applied by Mr. Reh fuss, would have been valuable, and might have been commented on by them with great propriety.

J. A. W.

NOTICES.

The Journal of Agriculture.—Working Farmer.

Boston is a great center—from it railroads radiate; to it thousands look, and in it gather;—gather, what its excellent and thrifty sons are so well able to disseminate—knowledge.

Owing to the political, social, and other advantages which it possesses as a center, the result of circumstances, both natural and artificial, this city is peculiarly well situated for the diffusion of knowledge, and as we naturally look to the East for light, so we almost involuntarily look to Boston for illumination upon many dark themes. Here we have a bis-monthly ray of no mean character, a luminous ray of scientific light, which is irradiated for the benefit of the benighted agriculturists everywhere. Its motto, "Science is knowledge systematized," — is the rule of action with its scientific Editors, one of whom is well known to the readers of Scientific Agriculture—Professor Mapes.

The *Working Farmer* of New York is not to lose anything, however, by this arrangement, excepting that it can no longer be claimed to be the only agricultural journal truly scientific—for its talented editor, with all his consultations agricultural, appears to have plenty of time to attend to his duties in both chairs, and each paper is indebted to the other for articles.

Professor Mapes has struck the chord in the right place. The Legislature of New Jersey will not appreciate Scientific Agricultural Education; that of Massachusetts has shown that they will, and have already moved efficiently.

This "Journal" is ever welcome to our table, and affords much excellent reading. for though it is not very *horticultural*, it deals manfully with *principles of culture*, and they

are the same, whether they are to be applied with one or other of the prefixes, *agri-*, *terri-*, *horti-*, *flori-*, *arbori-*, etc. Principles—scientific principles, are always desirable, and are of equal value in one latitude as in another. As in medicine, so in rural affairs; with correct principles, a knowledge of facts incident to the branch pursued, and more than all, with *common sense*, a man will conduct his farm or garden equally well anywhere. From the pages of this "*Journal*," sundry articles are marked for abstraction, to give a better idea of its staple. In the meantime, it is heartily recommended.

TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY.

This valuable series of annual contributions from the Empire State to itself, or from its intelligent farmers to one another, is just in character with everything of the same kind which is done there. The whole series, for which I am much indebted to the polite and attentive officers of the board, constitutes an agricultural library in itself, which must be highly valued by the farmers of that state; they are replete with valuable facts, gathered, not only from the meetings and reports of the State Society, but also from the numerous branches which exist in almost every county. No one can fairly estimate the immense advantages of such a publication, embracing so varied topics, handled by minds of every character and bias, but all backed up by the experience of practical operations. Among the varied topics, are many of the most valuable notices of fruits and orchards; the remarks and illustrations form an excellent guide for those who wish to propagate and cultivate orchards. The state and the country owe much to the indefatigable exertions of that most admirable Secretary, who

also keeps us advised of the whole working of the machinery of the State Board or Society, by the publication of its "Journal," for the receipt of which he lays me under renewed obligations, which can only be repaid by bidding him welcome upon the land of the west. He must come to see the fruits of the seed he has sown, and gather their sweet-smelling savors produced upon our soil. New York has set a mark, and made a trail which we need not be ashamed to follow.

DELAWARE COUNTY INSTITUTE, Sixth Annual Report of the Committee.

PENNSYLVANIA, claiming to be the oldest of the States in the matter of agricultural advancement, by means of consociation and mutual improvement, has been outstripped by her neighbors, but is again urging forward her Conestoga teams in the determination to overtake the leaders. The

State Society have recently held a grand demonstration in Harrisburg, and the old and venerable association of Philadelphia county continues to brush up their armor, and to drive up their steers and ploughs.

Delaware county, however, is determined not to be left behind, and she has given abundant evidence of the excellent training given to her sons and daughters, in their works, reported upon in this pamphlet.

It is pleasant to find that the interest does not flag among those most concerned, the contributors, for it appears that the number of entries has constantly increased, requiring much additional space for their display. Fruits, Flowers, and Culinary vegetables seem to hold a deservedly high rank among the articles exhibited.

The pamphlet contains an excellent and appropriate address, delivered at the close of the exhibition, by Charles D. Manly.

VALUE OF FORESTS.

HORACE GREELY, in commenting upon the "treeless regions of England," writes to the *New York Tribune* in the following style:

"Friends at home! I charge you to spare, preserve and cherish some portion of your primitive forests, for when these are cut away, I apprehend they will not be so easily replaced. A second growth of trees is better than none, but it can not rival the unconscious magnificence and stately grace of the Red Man's lost hunting grounds, at least for many generations. Traversing this comparatively treeless region carried my thoughts back to the glorious magnificence and beauty of the still unscattered forests of Western New York, Ohio, and a good part of Michigan, which I had long ago rejoiced in, but which I had never before prized so highly. Some portion of these fast-falling monuments of other days ought to be rescued, by public forecast, from the pioneer's, the woodsman's merciless axe, and preserved for the admiration and enjoyment of future ages. Rochester, Buffalo, Erie, Cleveland, Toledo, De-

troit, etc., should each purchase for preservation a tract of one or five hundred acres of the best forest land still accessible, (say within ten miles of their respective centers,) and gradually convert it into walks, drives, arbors, etc., for the recreation and solace of their citizens through all succeeding time."

American Peaches in Liverpool.

The *Liverpool Mercury* says that "it is well known that the United States produce immense quantities of that most delicious fruit, the peach; and, so far as we have heard, none have ever been brought into this country. A gentleman on board the *Africa* has, however, made the attempt, and, with some care, has succeeded in bringing them in a perfect state. He has brought them as a present to the family and friends of a gentleman farmer of this town, who may therefore claim to be the first importer of ripe peaches from the United States to England."



Vol. II.

DECEMBER, 1851.

No. 3.

HEDGES.

A YEAR ago, in one of the earlier numbers of the first volume of the REVIEW, the editor presented a somewhat extended essay upon the subject of live fences, which essay had its imperfections, as a matter of course. It was not prepared for a prize medal; nevertheless its author has received more thanks and commendation for that than for any other article in the volume. Again and again has he been consulted upon the subject, not only by his neighbors, but when traveling, and by letters from a distance in every direction. Now, all this is not said in a boastful spirit, but merely to show how deep an interest is felt upon the subject, and also to submit that I am well aware there is much more to be said upon it before it is exhausted. I had hoped, indeed, that some other and more able hedger would have taken the field, and with his more voluble pen would have eliminated the true principles and practice of this kind of fencing.

Having waited a long while, so long, indeed, that I fear the patience of some correspondents will be exhausted, I shall resume the subject, and in doing so, again urge what I have already set forth as to the *wide planting, thorough culture, and above all, the severe cutting of the hedge, when it is made*

of the *Osage Orange*, which has justly been styled, "the best of all hedge plants." In this resumé, I shall call upon the pages of some periodicals, in which are the remarks and observations of others,—wiser men, and better qualified to express opinions upon this subject. In some instances, these will be confirmations of the views expressed last year, as to the best plan for making and treating a hedge.

One correspondent writes:

"The fertility and increasing value of our Western land furnishes so strong an inducement to the clearing of the native forests, that woodlands are rapidly disappearing, and timber daily increasing in value. Indeed, so rapid has been this increase in value, since the settlement of the country, in the Ohio valley, that the subject of a substitute for fences has already become of importance to farmers and horticulturists, and as a matter of economy demands their serious consideration. There can be no doubt but that a substitute, in this and the neighboring States, must be furnished by live fences, as surface stones to make walls are not so plenty as in the Northern States. Much has been written on the subject of hedges, and much labor expended in attempts at their cultivation, but

owing to the employment of exotic plants in the experiments hitherto made, these attempts have so generally failed, that farmers and gardeners have become, in a great measure, discouraged, and their efforts to plant hedges almost relinquished. This discouragement would, however, soon be removed if we were to turn our attention to the cultivation of suitable plants, that are indigenous to our soil and climate. With a view to calling attention thereto, I will mention two that will, no doubt, form handsome, permanent, and impenetrable hedges. First, the Honey Locust, (*Gleditsia triacanthos*), with its numerous branches, formidable thorns, and beautiful leaves, presents itself to our consideration. It can be easily raised from the seeds, which are abundant every fall. A demonstration of its permanency may be seen in a hedge planted nearly thirty years ago, on the farm of Col. S. Cloon, in this county; and although from a change in the divisions of the farm, it has been neglected nearly from the time it was planted, yet it still presents the appearance of vigorous health, with every prognostic of long life.

The next plant that is worthy of our attention is the Crab Apple, (*Pyrus coronaria*.) Perhaps no other tree, capable of being reduced to the shrub form, would make so desirable an inclosure for a garden. The almost unrivalled beauty and fragrance of its flowers, would constitute it a sweet protector, and an object of admiration. VERBUM."

To this I append my hearty approval, in regard to the Honey Locust, which I have not yet seen fairly tried. The greatest objection to it will be its rapid growth, requiring the most severe and unmitigated pruning. The Crab Apple has proved itself a beautiful hedge plant; so has the Siberian Crab, as may be seen from the following extract from the Horticulturist:

"I saw, not long ago, a line of hedge which

was made by planting the seeds of the Siberian Crab—a small ornamental variety of the apple, which is well known in the nurseries, and sought after for its little fruit. The tree is naturally a small one, and has, not exactly thorns, but branches which become somewhat thorny and resisting. It naturally forms a thicket, with a good many branches, so that it takes and keeps the hedge form very easily. The seeds of these crabs were sowed in the garden, and when the seedlings were a year old, he transplanted them into a row where they were to grow as a hedge. They were set six inches apart, in a single row, and the tops were cut off within three or four inches of the ground the same spring they were planted. They made a fine growth, and the next spring were again cut down to within six inches of the ground. This made the hedge bushy and thick at the bottom.

"The hedge is now five years planted. It has attained its proper size, and having been regularly trimmed every spring, has become one of the thickest and most impenetrable hedges I have ever seen. It requires trimming but once a year, and seems to me well able to take care of itself the rest of the time. Besides this, it has a fine appearance in the spring, when it is covered with blossoms, also in the autumn, as it begins to bear considerable fruit. Would not the Siberian Crab, or its seedlings, make a good farm fence?"

This communication from a valued friend in Illinois should not have lain so long unanswered, but it was lost sight of in the confusion consequent upon absence at the fall shows.

MR. EDITOR:—The scarcity of timber in our State, has led to various plans of fencing. Latterly, the public mind seems directed towards the Osage Orange, which is now raised and sold in considerable quantities, for the purpose of hedging. Yet there are many who doubt its adaptation for that purpose. That it will, with proper management, make an efficient hedge, seems not to be doubted; but it is feared by some, 1st. That the difficulty of keeping the hedge dense at the bottom, the cost of pruning, and its tendency to shoot upward, will all increase as the hedge grows

older. 2d. That the annual cost of shearing will be too great for it to be of practical utility to the farmer. 3d. That it will not bear the amount of annual pruning necessary to keep the hedge within proper dimensions.

Several notices have appeared in our publications about hedges from ten to twelve years old near Cincinnati, and particularly concerning those on lands now, or formerly, owned by Mr. Neff, near the Yellow Springs. If there are such hedges in the vicinity of your city, it is hoped that you will be able to inform us whether said plant appears to be subject to any of the above objections.

And please, also, to state what is now the amount of annual labor necessary to shear hedges 12 years old; and does this expense seem to increase or diminish as the hedge grows older, and are they sufficiently dense at the bottom to be proof against small swine.

A statement of facts on these points will be of much value to some of the inhabitants of our State.

M.

I now cheerfully reply to these queries, so far as it is in my power so to do. In the first place there remains, but little doubt in the minds of those who have observed without prejudice, that the Maclura is the best hedge plant that can be used. It has more advantages than any other, and its disadvantages may be all accommodated or obviated. It will, with proper management, make a most efficient fence; and taking up the suggested difficulties seriatim, 1st. I believe that the cost of pruning will not be a serious item when the hedge is established, and will be a constantly decreasing quantity; that the leading shoots which occasionally start up may be easily kept down, and that there will be no increased difficulty in keeping the bottom of the hedge close, if it has been commenced properly, as directed in my previous article. But this will always be a difficulty, and an increasing one with hedges that are not

properly grown; so as to be widest at the bottom, and forever kept so.

2d. For the cost of clipping, I shall refer to those who have miles of hedge, and who tell a practical story about them, and shall make some extracts from communications found in the *Prairie Farmer*, written in that land of prairies and hedges.

3d. From a knowledge of Vegetable Physiology, and from repeated observations made upon shrubs and trees, that have been subjected to constant clipping, I have no hesitation in saying, that no difficulty need be apprehended from the effects of proper pruning, upon the health of the plants. The Maclura certainly bears it very well, and soon accommodates itself to the treatment—it assumes quite a different growth and appearance in the hedge from that which it presents in the nursery or park.

In regard to the next query, relating to the old hedges near Cincinnati, I am really mortified that it must be written—they are failures; and worse than that, we have miles of young hedge that will be no better, in all the great essentials of a close fence. This is altogether owing to want of proper management at first, and to subsequent neglect.

Mr. W. Neff was one of the first to apply the Maclura to hedging, in this neighborhood, not at the Yellow Springs, but near Cheviot, in this county. Those hedges are now thrifty, and show no signs of decay despite the grass which grows among them. In some lines they are protected, I don't know from what, by board fences, which have, perhaps, always stood too close to them; and one line, along a turnpike road, has recently received the support of a substantial stone wall! The fact is, they have never been close at the bottom, becoming more and more open every year; as the lower branches are smothered by the wide-spreading tops that tower far, far above them. The only treatment for them will be

to begin over again, by cutting them off at the ground, and in two years a low wide fence could be produced that would be impassable by swine, large or small, and that could not be overleaped by horse or bull, and in which a pack of hounds could not induce a rabbit to seek refuge. At the same time, it would be a beautiful ornamental outline to the orchard it was designed to protect, and which would remain safe from external intrusion of mankind, without needing a barbarous recourse to guns and dogs.

Mr. W. Neff, to whom reference is made in the communication, has since purchased the Yellow Springs, and has there planted some long lines of hedge. I believe he at first anticipated pursuing the plan of training recommended by the editor of the Ohio Cultivator, that of looping one plant into the next, bending them all in one direction. His hedge is young, but a passing glance assured me that it would never be close at the bottom, and he appears perfectly well satisfied that such is the case, but he says he can make a perfect hedge at any time by cutting it down to the ground, and training differently.

Mr. Bateham's inclosure of Maclura, in the city of Columbus, now stands alone next the street, a perfect barrier against cattle, but small pigs will *permeate* if he don't watch closely. I have no faith in the plan. Still less disposed am I to consent at all to the feasibility of the plan pursued in our great Cemetery, by which the lot holders must be taxed with the support of a fat, full-grown Englishman, and one or two aids, who, in the winter and spring, remove the spines, that he, with thick gloves, may safely handle the long shoots of the previous season, and interweave them in meshes of a few inches, and *tie* them up neatly to a frame work of slats and stakes in the line of the hedge that is to be. As we have only two or three hundred acres in the Cemetery, it may be necessary to economise

space, and hence the necessity of making a narrow hedge on the outside boundary. It, no doubt, looks very pretty when first done, provided the shoots are of even size and length, and in summer, the first summer, it will be a pretty green fence, not much thicker than a board paling—but what will it be in three years?

The Buckthorn hedge of Mr. A. Ernst, on the Cheviot road, on a bank, supported by a wall, where little additional fence is needed, has also been treated in this way, and looks very pretty as an ornament, always barring the bars to which it is tied. Moreover, ground sells by the foot there, and it is planted in nursery trees within, hence economy in space is desirable.

Some additional testimony in favor of severe clipping is obtained from the Family Visitor, edited, in part, by Prof. Kirtland, of Cleveland, O.:

“In some recent expeditions into different sections of Ohio, we have observed several unsuccessful attempts at hedging. Our confidence in the Osage Orange and Buckthorn, as materials for inclosing farms, is increased rather than diminished, by our late observations. The failures have arisen from an anxiety to grow a hedge in one or two years, which requires double or triple that amount of time. The line of quicks, whether the Osage Orange or the Buckthorn, must be repeatedly cut back, near to the ground, from year to year, or even twice during a season, until a basis is established so thick, wide and firm, that neither man, beast nor bird can penetrate through it; then a top can be grown in one or two seasons, which will afford a permanent and effectual defense against all intrusion. Take this course, and success will attend your efforts, but haste will result in failure, as some of our Cincinnati and Columbus friends can testify.

The regular old-fashioned pruning shears are preferable to all other instruments for dressing hedges. [Doubtful.]

Even in Kentucky, the importance and necessity of hedges begin to be felt, and some of the best farmers are turning their attention

to the subject. They are recommended to avoid the difficulty of raising the plants, by purchasing them from the nurserymen, as they may now do, in any quantity, at reasonable rates,—see advertisements.

Mr. VENABLE is the first person I have heard of who has succeeded with seed grown so far north; for though the trees frequently bear in this neighborhood, the seeds do not appear to be ripe enough for vegetation. But to the communication: .

SHELBY Co., Ky., Aug. 15, 1851.

DR. JOHN A. WARDER:

As hedging is becoming a matter of prime necessity, not only on the prairies north of the Ohio and west of the Mississippi, but also in Kentucky and other states that were once heavily timbered, and from which the forests are fast disappearing, it is becoming a subject of interest to know every thing that may facilitate, or retard the production of hedges.

My experience on the subject is but limited, and confined entirely to the Osage Orange, which all seem to agree, is the only plant, adapted to our soil and climate, for that purpose; and indeed it seems to be considered as better suited for this object, in every respect, than any plant known in Europe or America.

I have read every thing, that has fallen in my way, on the subject, in regard to the management and preparation of the seed, cultivation, etc. And since I have had a little experience on the subject, I have come to the conclusion, that most of those who have written for the instruction of others were mere novices in the business, and have so mystified the subject as to deter many from making the attempt.

My own experience has proven to me, that there is no more skill necessary in sowing the seed and cultivating the plant, than there is in the culture of corn. The only thing to be

guarded against, is a late frost in the spring, which may kill the plant if not protected. I have planted in November with good success, and I would by no means sow later than the 15th of April; there is great danger of the plants being killed by drought while very young. But the greatest difficulty yet experienced in the business, is the failure of the seed to germinate, which has been the source of much vexatious disappointment, and loss of money and labor. The secret, I think, is easily explained. I am informed, by a lady from Texas, that most of the seed collected there is separated from the apple,* by throwing them into kettles and boiling them to soften the skin and dissolve the glutinous pulp in which the seed is enveloped, or otherwise, they may be thrown in heaps and left to rot, in which case fermentation takes place, which is equally destructive to the vitality of the seed, and hence the failures so much complained of.

I know not by what means honest men separate the seed from the pulp in the climate of Texas, but my own experience proves to me that there must be some method adopted to soften the fruit, or the operation of extracting the seed will be tedious in the extreme, and as that climate is not cold enough to freeze the fruit, the processes just referred to, have been adopted to facilitate the collection of the seed, without regard to honesty.

I have been planting seed for the last four years. Twice I purchased the seed at Louisville, and planted in good soil, with the utmost care, about the 15th of April, and in both cases the result was a total failure; and twice I procured the fruit from a tree growing in Dr. Parker's house yard, near Shelbyville, with which I have been entirely successful. The method I pursue in extracting

* To call it a berry, gives a very erroneous idea of the fruit. [Still it is a mulberry; *Artocarpus*—Ed..

the seed, is to expose the fruit to the frost until by freezing and thawing it becomes quite soft, then with a sharp knife pare off the rind, throw them into warm water and squeeze out the seed with the hand.

I would advise those who wish to purchase seed, to procure the fruit, put up in barrels, as it comes from the tree. It will be much cheaper, and we shall hear of no more failures.

The most convenient method of planting and cultivating the first season, is to form a bed with the plow, about twelve feet wide, in rich, light soil, pulverize and rake it smooth, then with the corner of the hoe, or some other suitable instrument, make drills about one inch deep, twelve or fifteen inches apart, then sow the seed tolerably thick; and if the soil is at all adhesive, so as to form a crust on the surface, procure some rich, loose loam from the woods, or elsewhere, and cover the seed about one inch or more. In transplanting, it is not desirable or advantageous to have large plants. Small plants can be set with much greater facility, and will make a rapid growth the same season. I have planted with a dibble, as you would cabbages, and now, after nearly two seasons' growth, they are larger than those that were from two to four feet high.

SAM'L VENABLE.

Another correspondent of the *Prairie Farmer*, is in favor of Thorns, and a doubter of the virtues of the Osage Orange, though his objections to it are not very cogent. No reasonable person would expect a thifty hedge to support itself on thin air. Like any other crop, it must draw upon the soil; and if we believe that there is such a principle as impenetrability, or such "a property of matter," we shall be forced to admit that "two things can not occupy the same space at the same time," and that where the ground is filled with the roots of *Maclura*, or any other hedge

plant, the crops will find it difficult to sustain themselves.

No old trees, in this neighborhood, have shown a disposition to be troublesome, by sending up suckers,—though it is quite possible that the roots, if cut by the plow, may send up shoots, in which case they must be cut off, to prevent the hedge from spreading.

"I have a mile of Thorn hedge now growing, of different varieties, with all their tap roots cut off, but they run others down. It is their nature, and I know not how to make them grow any other way. Whether quicks, slips, or cuttings, they will not throw out side roots, nor spread or interfere with other things. They grow to the height of from three to four feet the first year. We cut them off every spring, still a little higher every time, to make them grow thick in the bottom, and dwarfish, and keep them down. They are apt to run up too high. They should never be more than four feet high. I have eighty rods of Virginia hedge, planted out five years ago this spring, and I think in two years more they will be able to defend themselves against all animals. The ground may be cultivated up to the very stump. Timothy grass grows in the very hedge, to the height of four feet, and that is more than it does a rod from it. The Osage Orange, throwing out side roots, and interfering with other things, fully convinces me that it is the nature of them to spread all over the whole ground, and take full possession, and if they are of short duration, as horticulturists say all soft roots are, (and they are soft,) there will be plenty of replanting."

E. MARSHALL.

PROF. J. B. TURNER, of Illinois, is a great advocate for hedging—and his experience is valuable to others—he has tried Privet and Thorn, as well as the Osage Orange, now his favorite, he says:—

I agree with Mr. Marshall in his opinion of the Privet for a field hedge, and moreover a blight has this year attacked it here, which renders it perfectly useless even as an ornamental hedge. I also agree with him in the utility of the Virginia thorn, of which I

set the oldest hedge on my own farm, before I could get the Osage Orange. But now I prefer the Osage in our locality, and have entirely destroyed all my young thorn plants with which I originally intended to have fenced my lands, simply because I like the Osage better. But there are different interests and tastes in hedging as well as in other things, and the more thorn plants Mr. Marshall can sell his friends who prefer them, the more good he will do them, for I think these infinitely better than rails.

Moreover, there are large districts where the thorn could not be had, even if it was better than the Osage, and still larger regions where they can not wait for its slow growth. But many experienced cultivators are now offering the Osage orange at very reasonable prices, which they have been able to do in consequence of the excellent quality and good success with the seed last spring; and in my opinion, if the farmers do not buy their plants at these moderate and reasonable prices, they will stand greatly in their own light. It is possible it, is true, that plants may be as cheap, or even cheaper, another year, but it is hardly probable. It is doubtless true, that the seed will be much cheaper than ever before, as I have myself contracted for all I may want to use at ten dollars per bushel delivered at my door, which is much less than ever before.

But if you can get seed, plant it in the nursery, not in the hedge row the first year, or you will buy your seed too dear in the end. This season's experience has, moreover, I presume, convinced all that good seed is of more consequence than any particular mode of sprouting, though care and skill may still do something at that, as I have seen many places where the planter said his seed ALL CAME UP, when I was convinced not one quarter of it came.

As regards trimming the hedges, I intend, if life and time are given me, to speak more at large before another season. I will now barely remark, that I have never, in a single instance, known or heard of a young hedge being *cut too low or trimmed too often*, but I have known miles upon miles ruined, so far as small pigs are concerned, by the opposite course. If I was to make the best possible hedge, I would cut close to the ground the first time, and then cut every shoot off all

summer, as soon as it rose six inches above its fellows, down to the general level, and never leave "snakes' heads," as I call them, to stick up above their fellows for a single day, at least not for a single week, and this is but little trouble, if the operator will hang a sharp, stout, Dutch sickle, upon a common hoo handle, which makes the best possible hedge plasher for a young hedge, worth all the shears and common plashers in the market, and is moreover the most economical and useful tool on a place, to trim shrubbery, head in fruit trees, cut small patches of grass etc., that can be had. I think all the writers in the west, fail, if they fail anywhere, in not urging a *more frequent and relentless mode of pruning*, after the first year. There is no danger that in practice it will be overdone; in our rich soil, where every plant which is stout enough for a hedge tends, if left to itself, to a far too coarse upward growth. The report has been circulated that because I and others have sold plants cheaper this year, we were losing confidence in them. This is not the case, at least so far as I am concerned. The simple reason for selling cheap is our good success in raising, which makes the crop pay at present prices as well, and even better, than it has ever paid at former prices. On the contrary, I have never before made so great exertions to get hedges on my own land, and they have never before done so well as the past season. The growth of the young plants here, on account of the extreme coldness and wet of the season, is, it is true, smaller than usual, but it is sound and good. As regards my reply, or rather my exposition of President Wilkinson's communication to the Boston Cultivator, I felt sure of two things when I wrote it:

First. That as I was a native of Massachusetts, I clearly understood it. I was also equally sure that the same causes which render an eastern or foreign agricultural paper utterly useless in the west, would lead western readers, to a great extent, to a total misapprehension of his true meaning.

That I was not mistaken on the first point, the following extracts from a letter since received from President Wilkinson will show; and I deem it not a little singular, that two men a thousand miles apart, who had not seen or heard from each other before, should on their first interchange of thought, on this

important subject, be found so fully to agree, especially where so many others supposed there was a disagreement between us. I have never yet had the pleasure of an acquaintance with President Wilkinson, and the letter called forth by my article inclosed, is the first and only one I have ever received from him. But I feel quite sure he understood one thing at least, the true theory and practice of fencing farms, and though I have not his permission to publish any part of his letter, I should give you the whole of it, except that it is mostly adapted to a country so different from ours, and where soiling is the great resort of the whole community. The part relating to the subject on hand is as follows:

"I read your article with great satisfaction, and am gratified to see that one of your experience in, and capacity to judge of this momentous matter, should so perfectly concur with me in opinion thereto. I was pleased to see that you so perfectly comprehended my meaning and intent in the article published in the Boston Cultivator, relative to the Maclura for hedges; also that you clearly explained what was meant by small farms.

"Perhaps I should have been more explicit while treating of the expense of trimming; but you exactly anticipated me, and filled up the deficit. My farm consists of seventy acres, perhaps I might with more propriety say my *garden*, for the whole of it is managed like a garden, and our hedges are trimmed as neatly as they would ordinarily be about a garden, hence the expense accruing is as I represented. The subject of fencing is one which I profess to understand, one on which I feel that I am well 'posted up,' and I am convinced that every farmer in the country could be as fully so, if he would only think for himself, and I am fully satisfied that to a very great extent the heaviest tax paid by the farmer is that paid for the construction of worse than useless fences. . . .

Very respectfully your obedient servant,

JNO. W. WILKINSON.

Mt. Airy Agr'l Institute, March 15, '51."

The article to which Professor Wilkinson refers is as follows:

"MR. EDITOR—As one engaged in fencing my own lands, and also in selling plants to others, I return you my sincere thanks for

publishing the excellent article from President Wilkinson, in your last number, respecting the Maclura, or Osage orange hedge plant. How you should consider this article as contrary to your former positions, or how the learned and able writer should have feared any attack from any western man, whose criticisms are worthy of any notice, I do not readily perceive.

"For myself, I consider every word of that article as strictly true, in the sense in which the writer intends to be understood. . . . I understand the writer to advocate precisely those views of the subject which I have always believed to be correct, and ever desired to aid in extending. He says—

" 'I consider the Maclura the best adapted of any plant with which I am acquainted for the purpose of live fences—and that it will be an economical, efficient, and desirable fence, to inclose vineyards, orchards, and ornamental lawns, or a boundary fence for small farms, suburban to villages and cities; and also upon prairie farms when fencing materials are scarce or difficult to be obtained.'

"Now, a Massachusetts man understands by a small farm, one of from twenty to fifty acres, and with this understanding this paragraph expresses, in my view, just what the Osage orange is good for, in the briefest possible terms. So I have always thought; so I still think. He thinks also it will not go above the 43d degree of latitude with safety; and I am inclined to the same *general* opinion.

"But he further speaks 'of a hedge left without any trimming some fourteen years, which had proved destructive to its neighbor's crops, for some twenty-five or thirty feet,' and says that it threw out its feeder roots, and exhausted the soil to that distance.

"Now, I have not the least doubt of the entire truth of these statements, and of their rigorous scientific accuracy too. But on this and some other points a western man may practically misunderstand him, though a man bred and born in Massachusetts, like myself, can not help seeing the whole matter truly at a glance. I will therefore beg leave to explain for a single moment.

"The soil of Massachusetts, so far as I am acquainted with it, is generally on the surface, a sandy, gravelly, or clayey loam, some

six or ten inches deep, beneath which lies what farmers appropriately call the "hard pan," or a sub-soil almost as hard as our western sandstone. Now this surface soil itself is by no means rich, not usually half as rich by nature as our soil is thirty feet from the surface of the earth. It will not even produce one good crop of Indian corn without an annual manuring, and even with this enriching, our poorest renters would not call it a decent crop.

"But it is the nature of the Osage orange first to strike a deep tap-root into the earth, like our hickories; and, second, like other western things, to grow at any rate, hit or miss.

"Now, in such a soil as that of New England, it will first attempt to send down a tap-root, as it does with us, but the coldness and hardness of the sub-soil at once forbid. It next determines to grow at any rate, and throws its feeder roots abroad in all directions above the cold hard-pan below. Of course it soon exhausts the thin meager surface soil near to it, and when that is exhausted it seeks for food further abroad, until it reaches that part of the cultivated field which receives the annual manurings of the cultivator, and here it appears that it manages to suck up enough of food from all this surface of soil, and the manure to boot, to make after all about as large an annual growth, and I should think even larger, than it does on the *unmanured* lands of the west.

"Well, I think the learned President of one of the first agricultural institutes of the country did exactly right in pronouncing a hedge plant that will so fight its way, and maintain its ground, on the barren granite hills of New England, 'the best hedge plant he knows of;' and just as right too when he says, that in such a country and soil, where farms are made up of patches of land of from one to ten acres, or even smaller, as their modes of culture require, 'it must be an exceedingly expensive fence.' I should say that for all such soils, especially where land is worth from \$60 to \$500 per acre, the Osage orange fence was the very worst sort of fence the wit of man could possibly devise, except as a protection for stock, fruit, sheep, etc., against dogs or thieves. But in our western soil the plant can follow its own nature—strike down its own tap-root, and

find more nutriment adapted to its nature and wants, in the soil within four feet of that tap-root, than it could find in a whole half acre of common New England soil.

"Still, with all these advantages in our favor, which any man can see at a glance, I have never dared to use myself, or to recommend others to use this plant more extensively than is recommended in the first extract above. That, and that only, I believe is its true use, and for this purpose, as 'a durable, immovable, and beneficial fence,' I believe, with the author of it, is, and ever will be, 'unsurpassed.' The smallest field I have made of it for farming purposes, aside from inclosures of house, stable, and orchard for fruit lots, is about twenty acres; and where land is likely ever to become as valuable by the acre, as it is near Boston, I perfectly agree with the writer that it should not be inclosed in smaller lots than would there be termed small farms, say from 20 to 100 acres each; as minute cross-fencing with any hedge will, or at least may, in time, be found even here, to take up too much ground; though the roots may never extend half as far, or exhaust one-fourth as much of our soil as of theirs.

"One word more about trimming: In Pennsylvania, I believe, they still trim in the old English fashion, with hand-shears and bill hooks; and as I understand the cost of setting post and rail fence there, I should suppose that to trim a hedge with such implements, to the satisfaction of such an institution as that over which the author presides, would be fully equal to setting the amount of fence he specifies. Indeed, I should have supposed it would have cost more. Around many of the English parks, where hedges are kept trimmed year in and year out to the single leaf, it costs more than three times the amount of labor specified, as I am credibly informed. But our Englishmen here in the west, with a good heavy plasher, will trim half a mile to a mile of any hedge that ever grew, as well as I care to have it trimmed around my farms, except immediately around the garden and house lot, perhaps—while a good stout Pennsylvanian, with his Philadelphia horse power shears, will do much better than that, as all admit who have seen them work. J. B. TURNER."

The following scrap of history, relating to

the Maclura, has been introduced into the *Prairie Farmer*. The hint as to mowing off before transplanting, is a good one; and Mr. SENTIES is also a thorough clipper.

In Timothy Flint's "Mississippi Valley," published in 1832, I find the following:

"*Bois d'arc*—maclura aurantiaca—Bow-wood—is a striking and beautiful tree, found on the upper crosses of the Washita, the middle regions of Arkansas, and occasionally, on the northern limits of Louisiana. It inhabits a very limited region, and we do not know that it is a native elsewhere. It has large and beautiful leaves; in form and appearance between those of the orange tree and catalpa; and taken altogether, it is a tree of extraordinary beauty. It bears a large fruit of most inviting appearance, and resembling a very large orange. Tempting as it is in appearance, it is the apple of Sodom to the taste. Most people consider it the most splendid of all forest trees. . . . There is a solitary tree, growing in a garden at St. Louis, sheltered by a wall, and we do not know if it would flourish in a situation so northern without a protection of that kind. . . . It is thought to be a wood more incorruptible than live oak, mulberry, or cedar."

It appears from the above extract, that as recently as 1832, even so eminent a traveler and botanist as Mr. Flint was ignorant of the value of the maclura as a hedge plant. Who, then, can give the history of its first application to this purpose? My limited experience convinces me that it is soon to become a succedaneum for all worm fences in Illinois, and now, with many others, I desire to know to whom we are indebted for its first practical introduction. We are under obligation to Professor Turner for communicating his *modus operandi* with it. If that gentleman can command the desired information, we trust to be gratified; for all know that he possesses the liberality to illuminate us.

I have a few thousand maclura plants, the seeds of which were drilled in April, 1849; they were mowed as low as possible in March, 1850, having attained an average height of three feet, and were immediately transplanted to the hedge-row. The growth

[* Nor is any mention made of such use in Emerson's Report on the *Trees and Shrubs of Massachusetts*, an official document, published so late as 1846.]

of 1850 was abridged to about four inches in April, 1851, and the knife was again unsparingly applied to all the new shoots about the 15th day of June—the part cut off this time, averaging two feet. Each stump thus left has sent out a multitude of branches since the last cropping, that will now average seven inches in length, and already make a mass impenetrable to a young rabbit. The most prejudiced old-school farmers now admit that my hedge will protect itself, and all within it, by the fall of 1852.

I have two hundred acres inclosed within my farm, and eighty acres of prairie yet to break and fence, with an abundance of heavy timber, and some to spare; yet I am determined to have more durable and beautiful fences than can be made with split or sawed wood. The maclura is rapid in growth, unapproachable, and almost indestructible in character, and beautiful in appearance. I know of no other plant so tenacious of life; some of mine were set too deep and others too shallow; some in very wet ground and others in dry; but I have not lost a dozen roots. With me the cuttings have lived and do live, and a small piece of root grows slowly yet promisingly.

FESTINA SENTIES.

The following paragraphs have been taken from the June number of the *Prairie Farmer*, which being the organ, if that word is allowable, of the great Prairie and hedging region, has furnished many valuable extracts for this article.

All who know EDSON HARKNESS, will appreciate the remarks he may make upon this subject; and it appears that he has succeeded with other plants to his satisfaction. His remarks about the borer are very interesting, as a matter of observation, and after all, if the hedge plants outgrow its ravages, they may bore away; though, for myself, I should prefer to have them stay away.

I am not at all sure, however, whether the same, or only a similar borer, attacks both the apple and the thorn indiscriminately. Insects are more restricted in their range of pasturage than most persons imagine.

"The question is quite unsettled, as to what may ultimately prove to be the best hedge plant for the West; and it is probable that different plants will be found to be adapted to different soils and localities. In my anxiety to promote this branch of rural economy, I have experimented with the Crab Apple, Prim or Privet, Broussa Mulberry, Virginia Thorn and Osage Orange. The three first named were planted because they were recommended by some writers, and not because I had any confidence in them myself,—in other words, to prove that they were not good hedge plants. A specimen of the Crab Apple, forty feet long, plashed three years ago, has been, since that time, and is likely to continue for an indefinite period, a good fence against all domestic animals, large and small. The remainder of the row, which was not plashed, has grown up into considerable trees, and is now a barrier against cattle and horses only. About fifty rods of Prim, set eight or nine years ago, is now, and has been for the last three years, a good fence against horses, cattle and sheep, but not against swine. A little more attention to shearing or cutting in, would have made it impervious to swine. The Mulberry, from a want of cutting in, has grown up into small trees, and been thinned out and abandoned as a hedge. Three-fourths of a mile of the Virginia Thorn, set partly in the spring of 1846, and the remainder a year afterwards, has been plashed during the past month, and is now, for all purposes, a good and substantial fence, and, with a very little care and attention, is likely to remain so for the next half century at least. About fifty rods of this fence is by the side of a well traveled public highway, where all sorts of quadrupeds and bipeds, clean and unclean, are suffered to run at large. The plants for this fence cost twenty-five cents per rod, and the subsequent expense, reckoning our labor at a high price, has been about forty cents per rod. Our rail fences, in this region, cost, on an average, at least one dollar per rod, and are, in many cases, composed of bass wood and sugar tree timber.

"Nine years ago, we set, along the bank of an old ditch, thirty-five Virginia Thorn plants, six feet apart, with the intention of suffering them to stand as trees, for bearing seeds; previous to setting out the thorns, the little boys put in seven apple trees in the

same row. These seven apple trees, which are now in full bearing, with a number of others in the vicinity, have been all vigorously attacked, and some of them, by a little neglect, ruined, by the borer; whereas I have never been able to find, after repeated examinations, the least sign of a borer upon the thorn trees. All the thorn trees which were planted grew well, and are each from twelve to fifteen feet high. The above is pretty conclusive evidence that the borer will never disturb the thorn if it can find anything else to satisfy its appetite. Whatever the borer may have done, in former years, to the hedges in New Jersey and Delaware, they have not succeeded in the confidence of those who have emigrated from that part of the country to this. Our New Jersey emigrants purchase freely of the Virginia Thorn, and say there is no danger of them failing to make a good fence on a rich soil. They further add, that some years ago, an insect appeared among their hedges, which materially injured some of them—but where they were *on a good rich soil, they recovered*. It is only upon the most soft and succulent plants of the young apple tree that the borer can live, and I am confident that he would soon starve to death upon the rigid bark and hard wood of the thorn plant. Yet, should he get a lodgement, and succeed in maintaining himself upon such hard fare, the tree would throw out new sprouts faster than he could devour them."

Even in the southern states we may find attention is directed to hedges—and I am glad to see, in the Southern Rural Almanac, the following notice, with directions for the management of the beautifully wild and luxuriant live fence, made from the *Rosa sempervirens*. Several years ago I witnessed the beautiful effect of its showy white blossoms, on the richest and most brilliant green foliage; though an impenetrable fence, it appeared to occupy too much ground; this, however, might be restrained with proper care. I only regret that we can not enjoy its beauties in our northern climate.

The farmers and planters of the southern states must feel under obligations to Mr. Affleck for his directions upon this and many

other rural topics, which constitute a large portion of the reading and readable matter of his annual offering.

For garden hedges, the *Laura-mundi* is one of the prettiest shrubs of the many very pretty plants of that region adapted to this purpose; here, where the protection of an evergreen hedge is much more needful, the American *Arbor-vitæ* and the Hemlock Spruce are much the best that can be planted for such a purpose, and they make more warmth in a garden or other inclosure than any one could imagine it possible that a mere screen of any kind could produce.

"Hedging with the Cherokee Rose is very generally practiced in many parts of the country, and becoming more and more so each year. The Cherokee is a strong growing, evergreen, running rose, (*Rosa lævigata*, of Michaux,) with numerous strong thorns, growing readily from cuttings; and upon any land strong enough to yield twenty barrels of corn to the acre, will form an impervious fence in four years, if well cared for. The long shoots interlace in such a manner that no animal can force its way through a hedge of four feet in height. Although extremely rampant in its growth on good land, it can be kept within bounds, as a neat compact hedge, with less annual labor than is requisite to keep up a good rail fence, and clean out the fence corners once a year. Many plantations are without timber enough to build a good rail fence, and must resort to something as a substitute; and for that we know of nothing equal to a hedge of this rose, especially for the more exposed boundaries. But for the fences, or where a planter is inclined to bestow a little extra care to form and maintain a neat, compact and beautiful hedge, we advise the Evergreen Thorn (*Crataegus pyracanthus*). The Cherokee rose will grow and make a fence, though a wild and unsightly one, if planted in the most careless manner, and left entirely to itself; the *Pyracanthus* must be planted with care, using rooted plants fully protected until solid enough to protect itself, and clipped at least once a year; the result being a strong, solid wall of beautiful green, covered in spring with a blaze of snowy blossoms, and in the fall and

winter with masses of bright scarlet berries. Cuttings of the rose may be planted in the hedge-row; but, though the thorn is grown from cuttings, none but rooted plants should be used in the hedge.

When about to hedge in a hill plantation, remove the fence, grub out every bush, tree, and briar, cane root, etc., and cut down any large trees which might shade or affect the hedge; upon the poorer portions apply a dressing of any manure that may be at hand; break up the ground, thoroughly, with a good two horse plow, bedding it, to the width of twenty feet, or as wide as may be practicable; run a heavy harrow two or three times along the bed thus formed, and the fence may be re-set; placing it to one side, so as to allow of the young hedge being tended with plow and cultivator. Where any low or wet spots are crossed, throw up a bank with the spade, leaving a ditch on the lower side, three or four feet deep, to drain the bank. Let all this be done as early in the fall as practicable. If the hedge row passes through any woodland, a space of at least sixty feet must be cleared for the hedge row, as this plant will bear no shade. It is not necessary to fence it from stock roaming at large, as they rarely injure it. A rough fence of poles, raised upon forks to the height of two or three feet, immediately over the plants, will be all-sufficient. River bottom lands must be drained. The bank of any ditch which drains the surrounding land to the depth of three feet, the contents of the ditch forming the bank, will answer well. Occasional flooding of a few days' duration, we have never found to be injurious. Standing water about the roots will inevitably destroy or greatly weaken the plant. Prairie land must be broken up during the previous May or June, to the width of thirty or more feet, and should, if possible, have a crop taken from it.

From the first of November until the first of March, but the earlier the better, plant the cuttings. These are to consist of *strong shoots* of the previous summer's growth, from ten to fourteen inches long, cut with a sharp knife. Some persons put in a single or even double row of cuttings, nearly as thick as they can be planted, by which a weakly growth of thin spray is produced, where strong shoots are wanted, at the base of the hedge. We have found three cuttings every three feet to be sufficient, and thus strong

plants are obtained. They are much more easily tended, and quickly fill up the intermediate spaces with stout shoots, such as ought to form the foundation of the hedge. We cut out a small pit with the spade, at every three feet, for the cuttings, which are inserted to within two inches of their top bud; if the soil is poor, throw in a shovel or two of cow-pen compost, and some of the soil, pressing it firmly to the base of the cuttings with the foot; then fill in the remainder of the soil. Immediately after working over the corn the first time, throw a light furrow to the rose plants, carefully cutting out or pulling up every weed and sprig of grass. At the next tending, which should not be delayed long enough to permit any part of the hedge-row to become foul, draw out the extra plants from each bunch, leaving one strong plant at every three feet, and taking care not to loosen the earth round the roots of that one whilst removing the others. The cultivator or plow used twice, and the hoe once after this, will suffice.

Under this treatment, the young plants will have made a strong growth the first season. During the fall or winter, cut off every shoot to within a foot of the ground. Early in the spring clean out the hedge-row thoroughly, top-dress the poor spots with any convenient manure; then plow to the plants, dressing up with the hoe and spade. If there be any missing places, fill them up with stout plants from a small nursery, planted purposely at the same time with the hedge. Once during the summer let the shoots, which will be numerous and quite strong, be laid up lengthways of the hedge, using light forks, and pressing the shoots down on the hedge. This must be done again in the fall or winter, when the ground on each side should be again plowed.

We find, that to give the plants sufficient strength to resist our high winds, it is necessary, the second fall, to drive a stout oak or locust stake firmly into the ground, every five feet along the center of the hedge-row, three or four feet high.

After this no further tending will be requisite, other than to chop down weeds and root out briars once or twice during the summer, laying up the shoots snugly as before, interlacing around the stakes, until the hedge has height and width of base sufficient. To

this it must be limited by the use of light bill hooks, with long handles, each winter.

In conclusion, it may be necessary to offer an apology for the prolixity of this article, which has extended beyond the limits originally assigned to it, without having exhausted the subject, or even occupying all of the ground intended. Indeed the subject is somewhat like the lateral roots of a vigorous *maclura* hedge—expansive, it will spread where pabulum invites—but, like them, better to spread in the substratum, seeking substantial food, than to be far-reaching in its upper branches, or flinging wide its thorny spray like the long shoots of the *Rosa sempervirens*, occupying an undue share of the upper space, which man has appropriated to nobler and more profit-yielding crops.

My readers may feel satisfied, that nothing but a conviction of the importance of the subject, and the observation of a general prevalence of erroneous views and practice, would have induced me to take so much trouble, and to occupy so large a share of the space with one topic. Those who are not interested in hedging, must be willing to yield a little to that large class of readers to whom it is a subject of the greatest importance.—All will do me the credit to observe, that no allusion has been made to my own hedge, noticed in the last volume, and it is now mentioned on account of the pride which the new proprietor of Scarlet Oaks very justly feels in maintaining its beautiful appearance. He is pursuing the course directed, thorough clipping, and the success attendant is quite encouraging—his hedge is beautiful; compact and impassable from its wide base to its tapering top—a solid wall of bright green; it forms a perfect fence. May it long reward his judicious care, and hedge him in from intrusion. Peter Outcalt will have a hedge that will be worth a visit to any one interested in this great subject.

THE PEAR UPON QUINCE STOCKS.

Nothing is attracting more attention in fruit culture than the growth of the pear upon the quince. It is but a few years since this mode of cultivation began to attract notice from American pomologists, though long and extensively pursued in France, and to some extent in England.

But the growth of the pear upon the quince, though so extensively practiced in France, has been confined until recently to a limited number of varieties, which have flourished with vigor and yielded abundant crops. All kinds, however do not grow freely upon this stock; and with the accession of hundreds of new varieties which have been produced by the Belgian cultivators, in the eagerness of the French nurserymen to increase their stock and supply trees which would speedily fruit, they have overlooked this matter, and have indiscriminately worked all sorts upon the quince without knowing or waiting to ascertain what the result of proper experiment would be. The consequence has been just what every well informed practical man would have seen, viz: that not more than one-half, if even one quarter, of the new pears succeed upon the quince stock. The trees grow for a year or two, but with the first crop of fruit they sicken and eventually die.

The question arises, what are the proper kinds of quince, provided there is a difference in this respect? 2d. What are the kinds that will succeed upon the quince? 3d. What soil and locality is best suited to the quince? We have not space to consider all these propositions now, but shall take the second one, which seems the more important of the three, and one upon which there is the least information, though it is by far the most needed.

The short lived character of the pear on the

quince has been, in some degree attached to it from the grafting of unsuitable kinds upon the stock. Almost every variety will flourish tolerably well for a year or so; but such as do not like the stock, soon show signs of feebleness, and a few crops of fruit are fatal to them. They die off, and their death is attributed to the usual cause. Disappointed at the loss of his trees, the cultivator abandons the quince and grows only the pear, losing all the advantages which the former offers over the latter.

We hear many complaints already of the death of trees upon the quince; and we are not surprised, for we see kinds advertised for sale upon that stock, which under the greatest care could not be made to flourish more than three or four years with any success. Every year brings additional experience, and we have found it a constant source of annoyance and disappointment to have a fine row of trees broken up by the death of one here and another there, from the unsuitableness of the scion to the stock; and we have found it necessary to remove others of these new sorts, which have lingered along, breaking the uniformity of the row by their weak and stunted growth.

We have before stated, that of the large number of American pears which have been brought into notice, few would succeed upon the quince, and we are more and more convinced of the truth of this. We are not aware of *one* native pear, grafted upon the quince, which for beauty of growth, vigor and abundance of fruit, can compare with the Le Curé, Louise Bonne de Jersey, etc., upon the same stock.

Such being the case, we must advise all cultivators to be cautious in the selection of pears on the quince. Take only such, especially when a quantity is to be planted, as

are known to attain to a good age, and, unless a tree or so for trial, reject those whose introduction is altogether too recent to have had their growth satisfactorially tested.

The Beurré Diel, Passe Colmar, Glout Morceau, and many other fine sorts, grow with almost increased vigor on the quince:

these will answer every purpose until others shall be added to the list. But of our American varieties, particularly the Dix, Heathcot, Tyson, Lawrence, and indeed nearly all the others, take those only upon the pear stock.—*Condensed from Hovey's Magazine, by H. P. Byram.*

ANEMONES.

Greatfield, near Aurora, Cayuga Co. }
N. Y. 11 month, 25, 1851 }

DR. WARDER—I am far down in the vale of years, and presume that the days of my writing for the public, are nearly over; but occasionally an idea occurs that I preserve on paper; and in the hope of adding a mite to the sum of practical knowledge, I sometimes send it to the press.

The article on *Anemones* in the first number of thy second volume, attracted my attention, and I wish to inquire of all thy readers who are florists, if they have successfully cultivated any species of this genus? If so, which species? and in what kind of soil?

Now, to set a good example, I will answer my own questions, and give my own experience.

We have here one wild species, (*Anemone pennsylvanica*), that decorates a few localities with its pure white blossoms, but it has always declined and perished when removed to my garden. Yet I find it in very different soils. One mile south of *Aurora* it grows abundantly on the flats of a mill stream; and three miles north of *Levana*, in a tough clay where bricks were formerly manufactured. Is it not the lime of our soil that poisons it?

Some twenty years ago, I procured tubers of *A. coronaria* (a native of the Levant,) and of *A. hortensis* (indigenous to Italy),

but never had a flower from either. With *A. parvina* (from France) I succeeded better. In a factitious soil, composed chiefly of pit-sand, and sheltered from the noon tide sun, I had this beautiful plant to flourish for two seasons. The flowers were scarlet; and every florist who saw it, wanted to procure one; but it died, and I have not obtained another.

A. pulsatilla (from England) also in a factitious soil, shaded on the south side by a board fence, bloomed for two seasons and then perished; but now having a soil which may be better adapted to these species, I intend to give them another trial.

A few words about the size of the tubers. Many years ago, I sent an order to a commercial florist in New York for half a dozen; and received that number of broken bits not broader than a finger nail. Of these fragments, not one grew.

Loudon says, "The roots of *Anemones* [*coronaria* and *hortensis*] are solid, flattened masses like those of ginger. A root which has remained in the soil two or three years, if it has room to extend, attains a great breadth, but is still only one root; and hence the mode of sale is by weight."

In regard to those same (two) species, he also says, "they are valued for their *hardy nature*, and also because they will flower at almost any season, according to the time the roots are kept out of the ground, and the

season when they are replanted. The prevailing colors are red, white, and blue."

"The usual time of planting is the end of October, covering the roots three inches. To have a bloom every month in the year, plant every month. Many varieties do exceedingly well in borders. A very severe winter will destroy the roots, if the surface is not mulched; but the *Anemone* is considerably hardier than the *Ranunculus asiaticus*."

DAVID THOMAS.

REMARKS.

READERS, will you not all do as well as our venerable friend? Contribute your mite to the general stock, hide not your ray but let it shine for others. David Thomas has always acted upon that principle, and he goes down "the vale of years" with honored brow, having left his mark upon the community in which he lived, and successors who will not discredit his fair name.—I hope some one will answer his queries.—ED. RE.

GRAVEL WALKS AND ROADS.

IN the very humid and comparatively sunless climate of England, nothing conduces more to the enjoyment of a country residence than a good, firm, and dry walk, upon the surface of which the ladies of a family can take their daily exercise, without annoyance from dirt or damp. No be what it ought, it should be available immediately a heavy shower has ceased; and to this end, it is desirable to get a hard, smooth surface, and to carry off the surface water by frequent gratings to an underground drain, not allowing it to saturate the materials of which the walk is composed, or the ground on which it rests; because, in proportion to the absorbency of the materials, will be the unsoundness of the walk after severe frosts. Both road-making and walk-making are frequently ill understood by those who attempt it.

In the ordinary course of proceeding, to form a road or walk, it is usual to make a deep excavation, which, when filled (as is usual) with large and coarse gravel, becomes a receptacle for the drainage of the adjacent ground, thus securing the greatest evil which can happen, by the constant saturation of its foundation. A better plan is to raise the edges of it above the adjoining surface, which keeps it dry. It is necessary that there should be six inches in thickness of gravel, for otherwise, however firm and good the surface might be, the worms would cast through and disfigure it.

Nothing can be a worse practice than the employment of large bodies of rounded peb-

bles at the bottom of a road or walk. After all, it is the native soil which carries the road, and if this is covered or roofed with materials which exclude the surface water, it will last; four inches of hard materials is sufficient; if pebbles, they should be broken so as to form a compact, solid body, which they do when angular. Rounded pebbles, independently of the facilities which their interstices afford for the lodgment of water, are ever rising upwards; when pressed upon any point of their circumference, they move and become wedged by the falling of finer materials around them; and as this is always going on, in time they get to the surface, making it rough and uneven. In no instance should any great amount of convexity be given to the surface of a walk; its crown should not be raised above the level of the margins; if the water will just fall to the sides, where the gratings are placed, it is all that is necessary; its outline can not be too accurately defined; it is avowedly a work of art, and should have the impress of the nicest artistical execution in all its details.

However good the material which forms the face of the walk may be, the action of the atmosphere, alternate frosts and rain, will in time decompose the surface, in the same manner as it decomposes the hardest rocks, and by its slow, but sure agency, effects vast changes in the surface of the earth; the particles of earth absorb water, they expand by freezing, and when they thaw, become soft and friable, presenting a

fit nidus for lichens, mosses, etc., to vegetate in; but with a well-made walk, we have only to scatter a little bright and fresh gravel on the surface, previously loosening it slightly, and it is restored to its former beauty. I have long discontinued the old practice of breaking up the walks deeply; and the more ancient one of leaving them roughly broken and exposed to the frosts, snows, and rains of winter, can not be too highly deprecated.

Asphalte and paving have both been recommended for forming garden-walks, but I think there are few persons who would not prefer the bright, warm color of good gravel, where it can be procured. I have been in the habit of forming a sort of concrete with the gravel we get here, which answers well; it is well watered and rolled to the consistency of puddle when wet; it is afterwards allowed to dry, and sets as hard as a rock—the first shower of rain restoring it to its natural appearance.

Walk-making, if well done, is very expensive; of course varying with the facility of obtaining fit materials. Both walks and roads should be made upon the same principle—that of preserving a moderately thick stratum of angular materials from absorbing the surface water; and yet so little is this understood, that thousands of tons of stone

are yearly thrown into deep trenches, to form, as it is supposed, the foundations for roads and walks, while at the same time they, instead of supporting them, secure the most effectual means of making them unstable and rotten. Let a dry surface be obtained—if not naturally, artificially—and cover it with a thin coat of such material as will keep it so.

In the present depressed state of the agricultural interest, this may be worth the consideration of such of our friends of that class as purpose making roads; because, the principle admitted, must cause a much less quantity of ponderous materials to be procured and hauled than is usually done in forming farm-roads; and as economy is the order of the day, this is one item in which a saving of outlay may be made where such labor is necessary. Whether it be in an approach road to the residence of a gentleman, or upon his farm, or in his garden, nothing is more satisfactory than well-kept roads and walks. In the wilder scenes of nature, we can admire rugged and irregular paths, but in what immediately relates to the comfort and enjoyment of the family of the man of wealth and taste, we look for perfection, as far as it is attainable by human means.

HENRY BAILEY.

Gard. Chron.

NITROGEN NO. 2.

THIRTY years ago, the importance of nitrogen, as an element of plants, was scarcely known or acknowledged by any one. Davy, and the chemists who preceded him, spoke of it almost in the light of an accidental impurity, and it is only within the last twenty years that we have heard much about the importance of this substance to plants. Investigations into the nourishment of animals very naturally led to the recognition of nitrogen as an important element of plants, because, as that peculiar gas was found to be a component of most animal substances, and to exist, in considerable quantity, in the flesh and blood of all animals, physiologists soon began to look at plants, as the probable source of this substance, and arrived at the conclusion that vegetable food must be chiefly valuable in proportion to the quantity of nitrogen which

it contained. In fact, there were only two sources whence herbivorous animals could well be supposed to derive nitrogen, and these were the atmosphere and their vegetable food. Experiment soon showed that such animals could not, by any arrangement, be made to thrive on food containing no nitrogen, even though they were supplied with plenty of fresh air; that, in fact, they could not thrive unless they were fed with vegetable matter containing nitrogen. A few years since, this conclusion was still further confirmed when it was ascertained, by direct chemical analysis, that the substances which exist in the blood of animals, and which are necessary to their growth, and to the development of muscle, really and truly exist, ready formed, in those plants which constitute the food of animals.

The true source of the nitrogen which exists in animals, was, however, only half

made out; it was satisfactorily established that though they might, and very probably did derive some small portion of it directly from the air, yet that the greater part must be obtained from plants.

The next question, of course, was, whence do plants derive it?

This inquiry is still undecided, though certainly there is a great mass of evidence, all tending to show that, like animals, they do not absorb nitrogen in the free state, but only in a state of combination, and as a compound already formed by some other agency. Between plants and animals, however, there would seem to be this important distinction, that whilst the latter absorb nitrogen in the form of an organic combination, that is to say, as vegetable matter, plants absorb it in the form of an inorganic compound; it being their especial office to combine it with other substances, and so form or elaborate organic matter fit for the nourishment of animals.

The great majority of facts tend to show that plants, though they grow in the free and open air, surrounded therefore with plenty of uncombined nitrogen, absorb little or none of it, but that they require to have it previously combined, by some chemical process, with another element, either oxygen or hydrogen.

The experience of most practical men as to the growth of plants, and the influence of soil and climate on their development, and more especially the action of manures, all lead to the conclusion that ammonia and nitric acid, even in minute quantities, exert a very remarkable influence on vegetation, which is healthy and luxuriant when they are present, and comparatively sickly and weak if they are altogether excluded. No known practical fact, and no accurate physiological or chemical experiment has been adduced to bear out the supposition that plants ever directly absorb nitrogen from the air. On the other hand, there are thousands of facts which prove that both ammonia and nitric acid are eagerly absorbed by plants; they grow with remarkable vigor, and on subsequent analysis, such plants are found richer in nitrogen than other plants not so fed. The simple and evident conclusion to which this seems to lead, is that, though it is not proved that plants are wholly unable to absorb any of the free nitrogen of the air, yet, that under all ordinary circumstances,

they must derive their nitrogen from some other source; the source being most probably ammonia and nitric acid.

Lengthened and ingenious calculations have been made to ascertain whether it is possible that plants could obtain from the air and soil a sufficient quantity of ammonia and nitric acid to supply them with all the nitrogen which they require; but these calculations are all more or less founded upon mere assumption. The fact is, that though it has been known for a considerable time that the air frequently contains a small quantity of ammonia, yet, in consequence of its great volatility, and the facility with which it is absorbed by water, and still more, in consequence of the very minute quantity of it which can at any time exist in a given bulk of air, its detection and estimation by chemical means is exceeding difficult, not to say almost impossible. In many inquiries of this sort, facts may be satisfactorily established by induction, and we may feel tolerably well convinced of their truth, without being able to settle the question beyond all dispute, by direct and unexceptionable evidence. There is no doubt whatever that there frequently exists in the atmosphere a very considerable quantity of various foreign matters, which, though they are too subtle to be detected by the use of chemical tests, may nevertheless be shown to be present, and which produce various important effects on the health of animals, and also in other ways. It would be well if the attention of chemists were drawn to this very curious and interesting subject, for there can be no doubt that improved modes of detecting the presence of foreign matters in our air would lead to the most important practical results, in a sanatory point of view. The power which steam and vapor generally possess, of assisting in the evaporation of less volatile substances, has been long known, but very little is known of the bounds to which this influence extends in nature, or the effects to which it may give rise. Recent experiments have shown that steam is able to carry away in a state approaching nearly to the form of vapor, the most fixed substances, such as soda, oxide of iron, etc.; and there are others which render it probable that steam is also sometimes able to cause the volatilization of some forms of organic matter. If this should prove to be really the case, it will lead to very interest-

ing inquiries respecting the spread of disease in the air, and the nature of contagion.

Although, however, we have difficulty in obtaining direct evidence of the existence of either ammonia or nitric acid in the atmosphere, yet we are sure it must frequently exist in the air, because we know that all organic matter, when in a state of putrefaction, evolves ammoniacal gas. It is also evolved constantly by the bodies of living animals, constituting an ingredient of their perspiration, and it is also continually being formed and poured into the atmosphere by the combustion of coal. Again, in the formation of niter in soils, we have further evidence of the presence of ammonia. When a soil contains potash, or some similar base in contact with putrefying animal matters, nitric acid is formed, but in such cases the nitrogen appears to pass through the intermediate state of ammonia; that is to say, the putrid matters do not at once generate nitric acid, but that they form ammonia, which in the presence of potash, etc., is in turn converted into nitric acid. In soils which have been manured, it is easy to trace the origin of nitric acid, but in those soils which have never been artificially manured in any way, but which continue from time to time to yield fresh crops of niter by mere exposure to the air, there appears little doubt that the nitric acid thus formed is produced by the action of potash naturally existing in the soil, and ammoniacal vapors which are brought from a distance in the air.

The quantity of nitric acid formed in the soil, in many places, particularly in the vicinity of towns, is probably much larger than is generally supposed. The earth below the pavement of towns, and that surrounding drains, even to a very considerable distance, frequently contains traces of nitric acid, in combination with lime and potash; and even the water of surface springs, such as those which generally supply street pumps, are in many cases found to contain small quantities of these salts. There appears, in truth, to be no doubt whatever that a very large quantity of ammonia is constantly being formed and given off into the atmosphere, the greater part of which, however, is brought down again, and spread regularly over the surface of the earth by dew and rains. It has been questioned whether that portion of rain-water which a given number of plants receive

and absorb by means of their roots, could contain ammonia enough to supply them with the requisite quantity of nitrogen, and it has been supposed that a heavy rain must of necessity soak far into the soil, and consequently wash away, and remove altogether beyond the reach of the extreme roots, a very large proportion of the ammonia thus brought down from the air; that this latter, however, is not the case, has been satisfactorily proved by recent experiments, to which we shall shortly draw attention. Such a calculation is necessarily vague and incomplete; but as far as can be judged, it appears most probable that plants are able to absorb enough nitrogen from the air and soil to supply their wants, in the form of nitric acid and ammonia.

It is obvious that this inquiry has a very important, direct bearing upon the use and action of manures. It is pretty well ascertained that the two most valuable ingredients of dung, and similar rich manures, are the phosphoric acid and nitrogen which they contain; and it is plain that the quantity of the former which plants are able to take up, must depend upon the proportion of it naturally existing in the soil, or artificially added to it. In the case of ammonia, however, it must be different, if the quantity which plants contain is independent of the soil altogether, and depends on the proportion which they are able to collect from that unlimited source, the atmosphere. It is evident that if plants are able to appropriate the nitrogen of the air, our views respecting the application of manure must be considerably modified; because, the question will no longer be, how to fix the ammonia, and how to supply plants with a certain quantity of nitrogen, in a state of combination, but rather how to bring plants into that state in which they are best able to appropriate the nitrogen of the air.

Always, therefore, bearing in mind that it is by no means impossible that plants may absorb a portion of free nitrogen, we must say that probability is much against it. At the same time, the inquiry is one of great interest, and well worthy of most careful investigation, but the experiments must be devised with judgment, and carried on with the most scrupulous care, and unwearied attention; for the difficulties which surround such investigations are very numerous; and without constant study, some of them would be

sure to escape the observer's notice. In all experiments on the growth of plants under glass cases and in confined portions of air, there are more or less unnatural conditions introduced, and these render it very difficult fairly to compare the results obtained, with those which are observed when plants grow under natural circumstances, or in the free and open air. In most plants we observe a superabundance of means; organs are provided more powerful or more abundant than are absolutely necessary to carry on the healthy functions of the plant; instead of merely forming a few seeds, a plant produces hundreds or thousands; and in a great many cases much more organic matter is laid up for use of each seed, than under any ordinary circumstances one embryo can possibly require. Some seeds contain so abundant a store of food, that even if half of it is destroyed accidentally, or purposely removed, the remainder is sufficient to nourish the embryo, and insure the growth of a perfect plant. Others again, such as the seeds of fruit trees, are not merely thus amply provided with organic food, but in addition they are furnished with a certain quantity of manure; for the fleshy covering which constitutes the edible part of the fruit, as it decays in the soil, or on the ground when the fruit falls and rots, forms a quantity of rich matter for the roots of the young plant, when the seed subsequently germinates. The beneficial consequences which result from these curious and healthful provisions are evident throughout the whole vegetable kingdom. Amongst other effects thus produced is the power which plants have of withstanding the influence of various external agencies, and other accidental effects, which would inevitably destroy them if it were not for their great vitality, and the remarkable power which they have of adapting themselves to surrounding circumstances.

This great vitality of plants, which infinitely exceeds that of animals, and the ex-

traordinary way in which plants live and continue to grow, sometimes under the most disadvantageous circumstances, and in the most unnatural situations, is, however, rather unfavorable, in some respects, to experiments on the nutrition of plants. When an animal is starved to a certain point, it will then greedily devour food which under ordinary circumstances it would not touch—a fact which is often illustrated by the introducers of some marvellous new kind of fodder for cattle; but in such cases it is frequently found that though they will eat it when they can get nothing better, yet they derive comparatively little benefit from it; and the fact that they are able to live upon it is no proof that it agrees with them, or can be called a good and wholesome food. In the case of plants all this appears to hold good, but to a far greater extent, for when we take away from them, or diminish their supply of what constitutes their food or is in any way necessary to their healthy growth, we generally find they make extraordinary efforts to continual growth, and to struggle on as long as they have a chance. Some of de Saussure's experiments will illustrate this, for he found that when certain plants were confined under glass bell jars, shut out from all connection with the atmosphere, and not in any way supplied with gaseous food, they continued to grow, but they fed upon themselves; the weakest leaves withered and faded and by their decay furnished carbonic acid, etc., which enabled the stronger young shoots to continue their growth and development. From these and many other similar facts, we may be led to conclude that even if it should be proved that under unnatural circumstances, plants are able to absorb and appropriate the free nitrogen of the atmosphere, it will not at all follow as a necessary result, that under natural circumstances, they ever do so absorb it.—*Gardeners' Chronicle*.

ORANGE CULTURE IN FLORIDA.

In 1835, the orange groves of Florida were killed by an unprecedented frost. Previous to that time, not less than 10,000,000 of oranges were shipped from the St. John's river, and the port of St. Augustine, and sold at the average price of \$1 per hundred. The Charleston Mercury announces that the orange trees of Florida are fast recovering from the blight of 16 years ago, and their culture is no more difficult than any fruit tree.

METEOROLOGICAL OBSERVATIONS.

ABSTRACT of a Meteorological Journal, for the year 1850, kept by S. PEARL LATHROP, M. D. Prof. of Chem. and Nat. Hist., at the College, Beloit, Wisconsin, Lat. 42° 30', Long. 12° west of Washington; elevation above Lake Michigan, 172 feet—above the Ocean, 750 feet

Month.	BAROMETER.			THERMOMETER.			Rain and melted snow.	Prevailing winds.
	Max.	Min.	Mean.	Max.	Min.	Mean.		
January, . .	28.98	27.90	28.55	46	-3	25.33	2.59	S. & N. W.
February, .	29.10	27.87	28.65	60	-7	27.50	.50	N. & N. W.
March, . .	28.99	28.09	28.58	59	8	31.50	2.82	N. & S.
April, . .	29.00	28.03	28.51	78	18	40.50	2.81	N. & N. E.
May, . . .	28.98	28.27	28.64	87	25	54.25	1.10	N. & S.
June, . . .	29.94	28.45	28.70	90	36	69.50	7.42	S. & S. W.
July, . . .	28.77	28.38	28.61	92	58	74.10	7.15	S. & N. W.
August, . .	28.83	28.38	28.62	92	51	71.00	15.73	S. & S. E.
September, .	28.92	28.41	28.64	84	38	59.72	2.58	N. & S.
October, . .	28.95	28.32	28.63	75	19	49.50	3.30	S. & N. W.
November, .	29.12	28.20	28.66	68	12	39.50	3.30	S. & N. W.
December, .	29.09	28.28	28.69	45	-4	24.00	1.94	N. & N. W.
Mean,			28.63			47.20	51.24 in.	

THIS being the first series of observations made at this place, no accurate comparisons, of course, can be made, in any respect, with previous years. The past season, however, is regarded by those who have longest resided here, as one of usual temperature through the summer months, and somewhat warmer than common through the autumnal months and December. The temperature of the spring months, however, is thought to have been lower than it is generally.

The mean temperature of the spring months is 42°.08; of the summer months, 71°.50; and of the autumnal months, 49°.57.

The mean temperature for the year 1850, is 47°.20; which is very nearly the temperature of the wells of the houses on the bluff upon which the College is situated.

The observations have been made at the hours required by the Smithsonian Institute, viz: sunrise, 9 A. M., 3 P. M., and 9 P. M.

The density of the atmosphere, as indicated by the barometer, is thought to be too low. This instrument, and all of those that I have used in making these observations, were made by Chamberlain, Boston, but it was somewhat injured in the transporting. It is estimated, from some comparisons that its range is about .50 of an inch too low.

It ought to be remarked, also, that the latitude and longitude, as well as the eleva-

tion of these observations, have not been definitely and strictly established by mathematical observations. They are regarded, however, as being not far from correct.

The amount of rain and melted snow for the year, is 51.24 inches, giving the large mean of 4.27 inches per month through the year. This amount is much greater than was to be anticipated, from the great number of fair days, and the small amount of falling weather, which is very noticeable by one accustomed to the clouds and mists of the Green Mountains. The remarks concerning the West, so frequently heard at the East, that "it rains here only at night and on Sundays," has been rather wonderfully established during the past year, as a large portion of the rain has fallen in the night.

Another fact observed is, that frequently the circumstances, which in Vermont are almost invariably accompanied by rain or falling weather of some kind, here pass away with only a storm of wind of greater or less force. This result may be owing to the clouds being dissipated and their moisture being absorbed by the great sweep of the winds over these extensive prairies. As two-thirds of the rain for the year fell in the three summer months, and one-third in one of these months, the remainder of the year may be regarded as having been rather dry.

The amount of snow which fell in the winter of 1849-50, was less than the usual quantity, being about four or five inches. There was some sleighing for three or four weeks. The quantity of snow, as appears from the observations of those longer resident here, varies greatly in different winters.

The year which has just passed is considered as having been rather more productive than usual. Though the spring was uncommonly backward, yet the temperature was so uniform that no portion of vegetation was unduly brought forward, and consequently injured by untimely frosts. Fruit, of the various kinds which have been introduced into this new country, did remarkably well, and gave a fair promise of the *fruit-full* years to come. It appears to me that this can not be otherwise than a very favorable country, both on account of soil and climate, for growing fruit of most kinds, such as apples, peaches, grapes, etc.—certainly so, if the last fall can be taken as a criterion of the character of future autumns.

The crops of grain, particularly of wheat and corn—the great staple productions of the southern portions of Wisconsin—are fully equal to those of any previous year. Thousands of bushels of the finest wheat, however, were lost by the great rains of July and August. A large amount of wheat cut down, but not garnered, was never removed from the fields. The farmers, from the great ease of getting seed into the ground, have become too much accustomed to sow more than they can command help to harvest and suitably secure. Another great error, is their delaying to garner what is already suitably cured for that purpose, before whole fields are cut down by their *reapers*. The crop of potatoes was good and scarcely at all injured by the rot. The growth and ripening of all the species of Cucurbitaceæ was much favored by the constant warmth of the summer months, and, though the roots of the vines were somewhat injured by the rains of these months, yet the amount produced in most cases was very remarkable. As an instance, I would mention a case related to me by a near neighbor—Deacon Woodward—of forty-four ripe, and twenty unripe pumpkins having grown, in his garden, from one seed!

Another fact, worthy of note, was ob-

served in the second flowering of several species of plants, as stated in the calendar, and the appearance of grasshoppers so late as the 13th of November. Not having seen these myself, I am unable to say anything of the species, neither am I sure that this fact will be deemed uncommon by naturalists. The *Cantharis cinerea* appeared in the latter part of June in great numbers. They had been noticed here the two years previous. This year, in many gardens, they completely stripped the potato vines of their foliage. No particular injury, however, appeared to arise from this. They also seemed to take much pleasure in feeding upon white clover, which they destroyed in a short time. Their progress was from north to south. They were in such numbers, that a half-bushel of them could have been gathered in a short time, with the appropriate means. The chinch-bug, *Lygæus leucopterus* of Say, which made its appearance in some of the northern counties of Illinois, and was thought to have done great injury to the wheat crop, did not make its appearance, that I am aware of, in this State.

There have been during the year several *heavy* storms, accompanied with lightning, the most remarkable of which occurred on the 26th of April.

The atmosphere here is remarkably transparent, so much so, that the stars have an unwonted brilliancy, and seem much nearer to you than in the northern portions of New England.

Another fact observed during the past year, is that of the "rotation" of the wind. The law of rotation, noticed by Dr. Dalton, and more fully developed by Redfield and Dove, that winds have a rotation from the north to the north-east, then east, south-east, and so through the points of the compass round to the north again, was sustained, with few exceptions. The number of circuits which have been made in this manner during the year, I am unable to state. Not thinking of this law of "rotation" of winds, until reminded of it by the fact here observed, proper care with respect to this point was not had in the observations. In the absence of mountains to act as disturbing local causes, we may have here an opportunity of establishing or verifying the law in this country. Our strongest winds are those from the south-west;

next to these, the west and north-west. The wind very seldom blows for any length of time from the north-east or east.

Floral Calendar, etc.—Feb. 3d, the coldest day of the year. The average of the observations of the thermometer for the day being $-3^{\circ}.50$. At 4 o'clock, A. M., it stood at -24° .

March 22d, Star of Bethlehem, Crocus and Snowdrop just coming up.

April 1st, Tulips and Crown Imperial up; 4th, soil in gardens sufficiently dry for working; 10th, Hepatica triloba and Ranunculus fascicularis in blossom; 15th, Pasque flower.

May 1st, Dutchman's Breeches, Squirrel Corn, Adder's Tongue, Sanguinaria; 5th, Grapes begin to bloom; 11th, Geum vernum in flower; 14th, Missouri Currant; 17th, Apple, Plum and Cherry; 20th Flowering Almond; 22d, Tulips; 25th, Dodecatheon media.

June 5th, Common Syringa in blossom, Hypoxis erecta; 7th, Double Larkspur, Sweet William, Peonia; 12th, green peas plenty; 14th, Garland Syringa in blossom, Strawberries ripe; 17th, Chinese Peonia, and all kinds of Roses in blossom; 18th, Escholtzia in flower.

July 1st, Currants ripe; 5th, Raspberries ripe; 10th, Wheat harvest commences; 22d, Gooseberries ripe; 25th, Dahlias and Gladiolus in flower; 27th, Harvest apple ripe; 25th and 27th, the hottest days of the year, the thermometer on each of these days averaging 82° ; at 3 o'clock P. M., the thermometer stood at 92° .

August 5th, Blackberries ripe; 7th, Tiger

flower in blossom; 10th, Pineapple melons ripe; 15th, Watermelons ripe; 19th, Garland Syringa, *Philadelphus grandiflorus*, in flower the second time; 25th, Snow-ball, *Virburum opulus*, in flower the second time; Green gage ripe.

Sept. 2d, Wild plums ripe; 6th, Corn ripe and fit for harvesting; 20th, Isabella grape ripe; 23th, frost for the first time. Virburnum opulus in flower through this month.

Oct. 7th, Dahlias and Tomatos injured by the frost for the first time. Virburnum opulus in bloom up to this date.

Nov. 16th, first snow; 22d, Ranunculus fascicularis in blossom the second time, and continued in bloom through this month.

Dec. 13th, the thermometer at sunrise stood -4° , the only time during the month that it was below zero.

REMARKS.—For this valuable record acknowledgment is made to that excellent agricultural paper, the *Prairie Farmer*. Though somewhat out of date, it is well worth preserving, and I hope to give the reader another similar account of the present year, in some number of the current volume.

These histories furnish valuable data of comparison as to the relative climate of different regions, and are always sought after with deep interest by those who would consult the climatic constitution of a country.

PEARS RUNNING OUT.

ANY person conversant with fruit, who will take the trouble to walk through the markets of Philadelphia, where more Seckel pears are to be seen than any where else in the world, can not but be struck with the very small size of these pears. If he has besides been in the habit, as we have been, of seeing the Philadelphia markets at this season, for some years past, he will make the comparison between the Seckel pears of Philadelphia now and those of ten or fifteen years ago. Then, the Seckel pears might be seen by the wagon load, large, fair, ruddy and handsome, as well as delicious. If you mention this present

degeneracy to a Philadelphian, he will shrug his shoulders, and say, "yes, the Seckel pear is no longer what it once was; I am afraid it is running out."

And yet, if you go to Boston, which is far from being so favorable a climate for fruit culture as that of Philadelphia, you will see Seckel pears so large and fine that you almost doubt their being the same fruit. If you are curious to investigate the history of the Seckel pear culture in the two places, you will not long be at a loss how to account for the difference. In Philadelphia they trust to nature and a soil once highly fertile. But

the Seckel pear trees have exhausted the soil, because it had only a certain amount of pear tree elements, and languished for more food. In Boston, they know that nature is a hard mother, and they rely on art, trenching the soil twice as deep as nature makes it, and supplying an abundance of food for the growth of the tree and fruit. Hence the average size of the Seckel pear in Philadelphia has dwindled down in twenty years from an inch and three-fourths in diameter to a little more than an inch; while in Boston it has been raised by high culture to between two and three inches in diameter.

Some soils, however, contain in themselves an almost inexhaustible supply of natural food for fruit trees. Even long culture wears out such soils slowly, because the natural elements of fertility gradually decompose and

form new soil. We have before us a couple of Seckel pears, of extraordinary size and beauty, sent us from Brandon, on the James River, Virginia, one of the largest and oldest estates in America, having been cultivated since the earliest settlement of the country. This estate still shows large fields, which, under the present good management (i. e. the judicious application of lime,) yield thirty bushels of wheat to the acre. But the Seckel pear trees here, without any special attention still bear larger and finer fruit than we have seen in Philadelphia. It is useless, with such proofs of the effect of soil and culture upon fruit, for our Philadelphia friends to talk about the "running out" of so modern a pear as the Seckel. It is the soil which has run out, not the variety.—*Downing's Horticulturist*.

PRESERVATION OF FRUIT.

Few operations in domestic economy on a farm are more important than the preservation of fruit. In one of his letters written at Paris, Mr. Greeley expressed the opinion that nicely prepared dried peaches would find a ready sale in London and other markets, if due pains were taken to introduce the article to public notice. It has long appeared to us that vastly more money might be realized from apples, peaches, pears, cherries and plums than is now obtained, if a perfect system were adopted in their management. In studying the keeping qualities of apples, Muleer discovered that those least liable to shrivel by the slow evaporation of their fluids (water) contained an unusual amount of wax in the cuticle, closing all its pores. This waxy matter performs a similar function on the leaves of many plants, particularly in tropical climates, by checking the too rapid escape of water from their surfaces. In keeping apples and pears, it serves to exclude oxygen from the juices and tissues of the fruit, by the presence of which chemical changes are started, unless the temperature is quite low, which end in fermentation and rot. Eggs are kept from spoiling by filling the pores in their shells with tallow or lard; and many large fruits have been long preserved by a thin covering of beeswax. The principle of excluding atmospheric air or its

oxygen is the point worthy of attention. In 1848, we put up peaches in Georgia packed in charcoal dust and surrounded with an atmosphere of carbonic acid. A can of these hermetically sealed was brought to the fair in Buffalo, but, although not decayed, the peaches had undergone such chemical changes as rendered them worthless, and they were not exhibited. This fruit was ripe when put up in July, and, after being kept 5 weeks where the thermometer was from 75 to 88 degrees, it was jolted on a railroad a thousand miles before reaching Buffalo. Of course the test or trial was not a fair one, but we are satisfied from other experiments that peaches must be kept at a temperature as low as 60 degrees not to undergo chemical changes, when the air is entirely excluded, sufficient to destroy the fine flavor of choice fruits. Prof. Lindley suggests, in a late number of the *Gardener's Chronicle*, the possibility of restoring the flavor and aroma of apples, pears, and peaches by some chemical agents. We have little faith in the success of any attempts of this kind. The preservation of fruits, potatoes, and other perishable articles of human food deserves more attention than it has hitherto received in this country. In packing grapes in thoroughly dried saw-dust, care should be taken to procure dust which contains the least volatile

matter. Any strongly scented wood, or even feebly scented, will impart more or less of its peculiar aroma to the fruit, and receive that of the fruit in exchange. All gaseous bodies have a natural tendency to mingle and permeate the spaces between the atoms of each. In illustration of this law, a gentleman whose olfactories were extremely sensitive said that he could smell sixty distinct stinks at one time. This was in a city. When a dog selects the track of his master's iron shod horse from that of fifty other horses on a stone paved street, as has often been witnessed, proof is exhibited not only of the existence of numerous distinguishable volatile elements, but of the wonderful powers developed in the olfactory nerves of some animals. From experiments which have fallen under our observation, we are inclined to believe that the mean temperature of the earth in the latitude of Rochester and Buffalo at the depth of four or five feet is low enough to arrest all chemical changes in apples and potatoes, properly buried for an extended and indefinite period, reaching perhaps to

centuries. A potato can be buried so deep in the earth in northern latitudes as neither to germinate nor rot, keeping like the mastodon preserved in a huge cake of ice in the north of Europe. We intend to test this matter in reference to both potatoes and apples in the city of Washington, to preserve them sound till the middle of next June.—Potatoes were in the market of the federal metropolis in June of this year at four dollars a bushel, and good fruit is too high and scarce to name. Grapes, peaches, nectarines, cherries, quinces and pears flourish in this climate; but it is a little too warm except in elevated localities for the perfection of apples. However it is proper to state that Mr. Calvert, of Prince George county, some eighteen miles southeast of Washington, who grows fine figs in open grounds, has given us several kinds of winter apples, which were not only highly flavored, rich, and crisp, but more free from that wood-like tissue and toughness peculiar to apples grown at the South.

DR. LEE.
Gen. Farmer.

ON THE PRINCIPLES OF BEAUTY IN RURAL SCENERY.

A MODERN writer observes: The grand characteristic of park scenery is quietness and repose, or what may be termed the passive sublime. The changeless green of the smooth grass tends to the production of this expression; an expression that is in vain sought for in scenery where the ground bears the marks of having been disturbed by the spade or the plow. Trees form a principal ingredient in park scenery—and more especially native old trees, as distinguished from young specimens of foreign origin, protected by artificial means, such as wooden or iron railings. The waving motion of branches and trembling of leaves add to the character of sublimity possessed by aged trees, and detract not from that quiet repose which the presence of moving objects of an artificial kind is sure to destroy. The feelings, associated with the presence of trees that have for ages withstood the raging of the tempest, are of a highly conservative nature, and are fitted to excite veneration for long-established laws and usages. The presence of cattle or sheep is favorable to an expression of repose, whether they be in a moving state or resting

under the shade of trees. They also impart a cheerful appearance to the landscape; and, lacking their presence, an otherwise beautiful scene is liable to partake of dullness. Immovable artificial objects, such as houses and bridges, are admissible in quiet rural scenery, inasmuch as they interfere not with an expression of repose. But clear and still, or smooth-flowing water, is the center which unites such scenery in one grand whole. The effects of clear, smooth-flowing water, in a landscape, are thus described by Homer:

"And where Piera, rolled through banks of flowers
Reflects her bordering palaces and bowers."

The associations connected with still water are familiar to the mind of every one, and have been thus beautifully clothed in language by Scotia's ancient bard, in portraying the countenance of a mighty chief who had been slain in battle: "When thou didst return from the war," says Ossian, "in lamenting the death of Morar, 'how peaceful was thy brow. Thy face was as the sun after rain; like the moon in the silence of night; calm as the breast of the lake when the loud wind is laid.'"—*Exchange.*

NEW YORK STATE FAIR.

Report of the Committee on Apples and Pears.

THE Committee appointed to investigate the merits of the specimens exhibited in class C., No. 53, Apples and Pears, endeavored to discharge their functions in such a manner as to give entire satisfaction to the competitors, to sustain the dignity of the great Agricultural Society of the State, and at the same time to be creditable to themselves. You may rest assured, therefore, that they spared themselves no labor in their efforts to accomplish these three very desirable objects.

The first investigations were made among the Apples, and it was gratifying to observe the great number and variety of well grown specimens of this standard fruit; and also, to ascertain that increased attention has been paid to planting more and more of the very best sorts, to the exclusion of those indifferent varieties that formerly constituted the bulk of our orchards; but which are now voted out of good society.

There were thirty-five entries of Apples, most of which embraced several varieties, and the quantities of each were generally abundant, so that the display was rich and exceedingly fine. Among the choicest sorts, a few may be mentioned, as their being designated may add to the interest of the report. The beautiful Northern Spy, as exhibited in several collections, attracted special notice, particularly the handsome display from Jas. H. Watts. The Baldwins, in several collections were fine. The Hawley, Early Joe, Late Strawberry, Primate, English Sweeting, Canada Red, Duchess of Oldenburgh, Dyer, etc., were considered very good. The entries of W. F. & E. Smith, Geneva; from F. W. Say, Greece; from Shepherd & Cheney, Rochester; from H. Robbins, Penfield; that of J. J. Thomas,

Macedon; of Thomas Roraback, Greece, and some smaller collections, were very fine. Among the evidences of keeping qualities, some apples of the crop of 1850 were presented, consisting of Russets, Canada Reds, and some others.

Seedlings were exhibited for the premium, but although some of them purported to be autumnal varieties, they were not in a condition to be examined fairly, as they were immature. That marked Father Apple, No. 140, was nearest to maturity, and is highly recommended by those who are acquainted with its properties. It is of medium size, and of a greenish color; of pleasant flavor, but devoid of beauty. The committee beg to be excused from expressing a decided opinion upon the merits of any, until they can have a more extended acquaintance with the fruits, believing that much injury is often done to the best interest of science, by too high and too early recommendation of new seedlings. The accompanying letter will furnish the opinion of Stephen H. Ainsworth, the exhibitor. (See A.)

The Early Jack presented a good appearance, but as it was not ripe, the committee can only refer to the accompanying document, (marked B.) for its history.

Fall Seedling Apple, exhibited by Mr. Webb, Darien, can only be reported on by a similar reference to document, (C.) as it is now quite green and hard.

The numerous collections of Pears, were very fine, and embraced all the standard varieties, some of those which have been found unworthy of culture, and a succession of aspirants for public favor among the newer varieties. The specimens were generally very well grown, and exhibited in considerable numbers, forming an exceed-

ingly important and attractive portion of the display. The Bartlett, Oswego, Onondaga, Canandaigua, Seckel, Dix, Stevens' Genesee, Washington, Tyson, Fulton, etc., were sufficient evidence, if, indeed, such were any longer wanting, of the superiority of our own native varieties.

Autumn Pears and Newly introduced Pears were only presented to the committee separately in one collection—to which the awards have been made—as they were regularly and distinctly set out upon the table, and embraced fruit of acknowledged excellence on the one hand, and such as gives good promise among the novelties on the other. (See lists marked D and E.)

Without desiring to be partial, the committee feel that the entry made by H. D. Dickerson, Lyons, a basket of Bartletts, deserves notice, on account of their handsome appearance. Also, that of W. F. E. Smith, Geneva, in which the Canandaigua, Bartlett and Flemish Beauty, were very fine. But the basket of Pears raised by Ellwanger & Barry, Rochester, was a very superior collection, and contributed greatly to secure the premium to this collection. A basket, J. Farley, Rochester, consisted of Bartlett's, beautifully colored; those of H. N. Langworthy, Irondequoit, and of Isaac Hills, Rochester, as well as some others, contained fruit of great beauty and excellence. The collection from, Thorp, Smith, Hanchett & Co., Syracuse, contained many new pears, and they are entitled to great praise; some are quite *new*, but they did not appear to be arranged for competition as "*New Pears.*"

The fruit pictures exhibited by Jas. H. Watts, representing his favorite Northern Spy, Wagener, Fameuse, Early Joe, Red Astrachan, and Seeknofurther Apples; and the Dearborn Seedling and Bartlett Pears, are very handsome, as works of art, and serve to keep a lively remembrance of the

beautiful fruits they represent. They admirably answer the end proposed, although your Committee fear they are but too flattering representations, being more highly colored than average specimens; indeed we suppose that they are taken from *picked* specimens, selected by a partial and admiring friend of fine fruits.

In conclusion, we desire again to express our gratification at beholding so fine an array of standard fruits represented by well-formed and perfect specimens. We would also suggest, that more definite regulations be adopted in proposing premiums, and in competing for them. In their absence, we have acted upon the principle, that no *collection could compete in two classes*, which we would like to see adopted as a settled axiom.

The awards have been rendered as follows:

Apples.

For the largest and best varieties of good table apples, three of each variety, grown by exhibitors, Ellwanger & Barry, Dip. and Hovey's Colored Fruits. 2d ditto McDowell Darrow, Greece, \$5. 3d ditto, J. Ryan, Rochester, Trans.

For best twelve varieties of table apples, N. Haywood, Brighton, \$5. 2d ditto, B. Hodge, Buffalo, Trans. and \$2.

Best basket of standard fruit, J. H. Watts, Rochester, Northern Spy apples, Silver Medal.

Pears.

For the largest number of varieties of good pears, John Morse, Cayuga Bridge, Diploma and Hovey's Colored Fruits. 2d ditto, Ellwanger and Barry, Rochester, \$5. 3d do., Bissell & Hooker, Rochester, Trans.

For the largest and best collection of Autumn pears, Ellwanger and Barry, Dip. and \$5.

Best collection of newly introduced pears, Ellwanger and Barry, Rochester, Diploma and Hovey's Colored Fruits.

For a large basket of assorted fruits, Ellwanger & Barry, Silver Medal.

JOHN A. WARDER,
CHAS. DOWNING,
T. G. YEOMANS.

(A)

The *Father Apple* is a seedling of West Bloomfield, Ontario co., N. Y. The tree was obtained by Gen. Amos Hall, (who came to this town in 1789,) of a Mr. Burlingame, with other seedling trees, about the year 1800, and set by him in an orchard on his farm, one mile east of West Bloomfield village. This tree commenced bearing over forty years ago; the Apple was selected by the General, as the best in the orchard, from which fact his children gave it the name of the Father Apple, which name it yet retains.

In 1823, Gen. Hall sold that part of his farm containing this tree, to a Mr. Hamlin, and which is now owned by his son, Samuel Hamlin, Esq., of Elmira. Some years ago, this tree was grafted into other fruit, through mistake; previous to which, H. B. Hall, a son of the General, purchased the place which I now own in West Bloomfield village, and grafted one tree with this Apple, which has been in bearing some fifteen years. There are two other trees on the farm now owned by C. Dann, of this place, which are all the bearing trees that I know.

It is a good and constant bearer, often very heavy, sometimes too much so. The tree is a good, upright grower in the nursery, and makes a handsome head as a standard. The Apple is not attractive to the eye, but very desirable to the taste. It is thought here to be by far the best eating apple known, of any season. It makes fine sauce, without sugar, and cooks well. J. H. Watts, Esq., of Rochester, says, it is *worth its weight in gold*. Size, moderate to

medium; nearly oblate conical, more or less ribbed.

S. H. AINSWORTH.

(B)

The Early Jack Apple's History.—About five years ago, in the month of September, I was visiting at Mr. Reuben Norton's, of Bloomfield, and in company with his son, was passing through the orchard of a neighbor of his, Mr. Boughton. We came to a tree, around which a large quantity of fine ripe, and very strikingly distinct apples were lying. I asked Mr. Norton if he knew it, or if it had a name? He replied, that it was a natural fruit, and called, in the neighborhood, "Early Jack." I was well pleased with it, and took home scions, to give it a trial. It bore last season and this, and we consider it a distinct and good fruit. These specimens are not fully ripe, and it requires to be so, before it is good.

The tree is a moderate, stiff, erect grower; young shoots stiff, moderately stout, dark brown, with grey dots; leaves rather small, very dark dull green, thin, flat, doubly, and sometimes trebly terrated, and the younger ones very woolly underneath; exceedingly productive. When ripe, the fruit is almost white, flesh white, very juicy, and of such an undecided sweet or sour, that it can not be said to be either.

P. BARRY.

(C)

Fall Seedling Apple.—The tree is a thrifty grower, top spreading, and a universal good bearer. Fruit esteemed excellent here, for table or cooking. Ripens from beginning to middle of September. Originated on the farm of T. C. Peters, Esq., and planted by his father, the late Joseph Peters, Esq., Darien, Genessee co., N. Y.

(D)

Autumn Pears.—White Doyenné, Duchess d'Orleans, Stevens's Genessee, Beurré Goubault, Swan's Orange, Bezi de Montigny, Seckel, Belle Lucrative, Bartlett, Henry 4th, Gray Doyenné, Gansell's Bergamot, Doyenné Boussock, Von Mons' Leon Le Clerc.

(E)

Davi, Triomphe de Louvain, Beurré de

Koenig, Pater Noster, Bezi Sanspariel, Grand Soleil, Benoist Fondante Van Mons, Colmar Musqué, Beurzé Beaumont, Doyenné Dillen, St. André, Bezi Veteran, Beurré Gris d'Hiver Nouveau, Reine de Paybas, Poire Auvin, Bergamot Thouin.

For this report, as for that on wines in the previous number, acknowledgments are

due to the excellent officers of the State Society, whose polite attentions have laid me under great obligations. Exceptions have been taken to some of the awards, by a writer in the *Genessee Farmer*, whose judgment in regard to the schedule is to be respected, even though it should differ from that of the Committee.—Ed.

COUNTRY LIFE AND CITY LIFE.

THERE is a very strong disposition on the part of many persons residing in cities to cultivate an acquaintance with country life. This disposition prevails more now than at any former period in the various cities of the Union, both Eastern and Western. It has been greatly fostered by the construction of railroads, by which men can do business in town during the day and retire to their homes in the country in the evening. This is one great advantage of railways which has not been sufficiently dwelt on. Men may now indulge their tastes for that kind of life which best suits them. They are under no necessity to be "cabined, cribbed, confined" in the city, even though their business lies within the city's dust and heat. Formerly, when the facilities of travel were far less than at present, men were forced to keep their families in town, because they found it impossible to attend to trade during the hours dedicated to business, and then to reach their homes unless their homes were near at hand.

The union of city and country life is viewed by many persons as the most desirable of all the modes of existence. The country by itself is too solitary for them, and the city does not admit of enough seclusion, and hence it happens that they deem the blending together of the social pleasures of the city and the solitary pleasures of the country as precisely that admixture of the elements of life which is most desirable. To all such the various railways are full of blessings. They can weary themselves in town during the day and find "tired Nature's sweet restorer" in all her glory and sweetness on each successive evening far away from the bustle and excitement of crowded streets.

Persons remove to the country from various considerations. Some go to gratify a life-long desire to enjoy the delights of communion with nature in her quiet places. Some go for health, others that their children may escape from the snares and temptations of the city, while others are prompted by economical motives, or the desire to cultivate the earth. He who goes thither to realize the dream which all persons of poetic turn feel, and which promises them that in living with nature they shall find health, peace and contentment for their souls, is actuated by a motive which is far more common than is generally supposed. There are few that reside in cities who do not often sigh for the quietude of the country—whose souls do not often sicken at the sight of the madness and folly that surround them—whose hearts do not pine for such peace as the pure breeze and the "brawling brook" utter to those whose ears are properly attuned. Almost all men think that, when the feelings of youth have subsided and the gray head and the wrinkled brow tell the tale of many years, they will flee from the turmoil of society and spend the failing and closing years of life in the bosom of the country. But they are only the few who are so fortunate as to carry out this cherished hope. The competence has not been secured in trade, or city friendships are of such adamantine strength that they can not be broken—or habit has become so forcible that it holds its prisoner in durance, and he drags out the closing marches of life's journey on the same dusty thoroughfares to which he was accustomed in "the clear and liquid morn of youth." Or, as is most likely, he, who when he first entered into the mysteries of Change often had visions of green valleys and forest

clad hills and fancied that there were no delights so endearing as those which cluster around the home of the farmer, finds that at fifty his heart has undergone great and surprising changes. He finds that the old sentiments are worn out, and that many a joyous hope of the olden time lies sepulchered in his bosom and that his soul has long since lost its longing for its pastoral pursuits, and that trade has its charms to soothe his breast for which he can find no compensation in the country. He looks upon his by-gone vision as a silly fiction, and congratulates himself on being sensible enough to continue his business operations, which at least put money in one's purse, which he has grown to consider the true philosophy, the *summum bonum* of this world. As we said awhile ago, we regard the facilities which railways afford to persons doing business in the city to establish homes for themselves in the country as one of the strongest of all the arguments that can be urged in their favor. We belong not to that class of persons who fancy that Innocence extends her snowy white wings over all the dwellers in the country, while Vice holds her only courts in the more crowded paths of humanity. The difference in the moral natures of persons dwelling in cities and in the country is by no means all in favor of the latter class. The virtue that has not fallen because temptation has not assailed it, is of slender fabric indeed, while that which has often been assailed and is not weakened, but is strengthened, is genuine and worthy of the name. If we wished to find the most devoted doers of good we are not sure that we should not seek for them in the crowded marts. There are natures that are far better adapted to country than to city life, and to them it is extremely desirable that all the facilities of railways shall be extended. We would have all such, after fretting away the heat of the day in the engagements of city life, to hasten back to some quiet home in the country where they can be at peace.

Many men have continued to live in the city because they have not been able to unite country retirement with the business of town. They wish to live in the country, but as they are not willing to sacrifice their business they find it necessary to remain where the incessant din of a city rings in their ears. To all such the construction of

a railway is indeed a blessing. At length a way is opened to them by which they can blend business with pleasure, city with country, and they embrace its offer with pure gladness.

It is not every man who forsakes the city for the country who is long delighted with the exchange he has made. Many a one sighs for the "old familiar faces" which used to smile at his approach. The old haunts of business and his old ways of pleasure and of profit haunt his soul. The hours grow long and the days seem to be greatly lengthened out. He becomes tired of the sight of green fields and waving trees. He lounges about and wonders how his neighbor continues to amuse himself. In fine, it is not long before he begins to suspect himself of great folly in having left his old pleasures in the city for fancied ones in the country. He embraces the first offer for his home in the country with all its pure air and gushing springs, and birds, and green hill-sides, and innumerable other sources of felicity "too tedious to mention," and beats a speedy retreat back into the dust of the city, where his eyes can rove delighted over piles of brick and his heart can drink in delight from ledgers, desks, and all the paraphernalia of a counting-room.

The truth is, a man to enjoy the country must have a natural fondness for such pleasures as the country affords. A man may not be a poet, painter, or musician unless he is born such, and it is scarcely less true that a man must be born with an aptitude for country life to excel in it. Like Edie Ochiltree, he must love to "daunder in the green lanes." He must have the "vision and the faculty divine" which enables him to observe with unspeakable interest the annual rise, progress, and decay of nature's green empire. Each season must in its turn bring to his bosom a store of delights. Even the hoarse voice of old winter howling through the stripped forest must be grand melody in his ear. He must be able to make a friend of the oak on his right hand and a companion of the stalwart hickory which rises on his left. He must hold 'converse sweet' with birds of all complexions and songs. He must be able to find inspiration in the old stump on which he sits to repose his weary limbs. His eye must be capable of discerning the beauty that laughs in the

sunny landscape, while each waving branch must present to his fancy a grace equal to that which glances from the step of a beautiful woman. All the sights and all the sounds of the country must fill his bosom with pleasure. Seed time and harvest must alike present lively inducements to his thoughts to go forth on errands of happiness. But enough. "Thou hast convinced me that no man can be a philosopher," said the Prince to Imlac, and we forbear lest we convince our readers that no man can enjoy life in the country.

The disposition which is now leading so many persons from the city to the country must inevitably result in a far higher kind of cultivation than has hitherto prevailed, especially in the vicinity of our Western cities. Men will soon learn, we hope, that a forest tree is not a nuisance to be cut down without argument or consultation. When we see a person fresh from the city go into the country and commit murder on oaks, elms, hickories, maples, etc., without scruple, we can not but think he has mistaken his vocation. A wise man will hesitate long before he decides in favor of waging a war of extermination on any old monarch of the forest with a preemption right to the soil of at least a century's length, tightly wrapped up in its bark, while a fool will presumptuously girdle forest beauties, slay vines, trim up, top, or otherwise mutilate a tree here and a tree yonder, just as if Nature did not know far better than any body does where a tree ought to grow and how it ought to grow. We have frequently felt indignant while contemplating the havoc which tasteless men make on the glories of the forest, and would, were we autocrats, utterly forbid a man to gash a tree unless it were first made to appear that some greater good could be accom-

plished by its removal than by its being permitted to stand as long as winds and worms see fit. We really can't see why a man who wishes to make the country look as much like town as possible should leave the city at all. There he can imitate his neighbors and thus escape the suspicion of being a fool, whereas the first hour that he spends in the country he contrives to write himself down an ass of the first water.

Many persons go into the country to live and there strive to keep up city habits. Perhaps this vice is almost inseparable from those places which lie near to the city. The true way to enjoy the country is to go beyond the reach of the bustle, the fashionable follies and the infectious atmosphere of town. Now that railroads are extending in all directions it will soon be entirely practicable for men to transact business in town, and then, as the dewy evening approaches, hie away into the depth of the country where wood-nymphs may be fancied if not seen in the dark forests, and one is not tortured by the sad spectacle of mincing ladies and foppish men, and where the talk is less of theatricals, matrimonial matters, and the latest fandangos, than of wheat fields, melon patches, and the prospect of peaches.

If a man has a heart for the country he ought to have a home far beyond the dust and heat and unhealthiness of the city. He will certainly be happier when his leading taste can be gratified than he can ever hope to be where every day life calls for the sacrifice of those sentiments which lie nearest the core of his heart. He will find true freedom and contentment, with the trees for his nearest neighbors, and prove that for him at least the country has far more enjoyments than can be found in the busy haunts of commerce and manufactures.—*Louisville Journal*.

A resident of this city, has taken out a patent for making sugar out of Indian corn and oil of vitriol. The process, though familiar to all chemists, is doubtless novel to most of our readers. A quantity of corn meal is placed in a boiler, to which is added nearly an equal quantity, by measure, of water, together with a small proportion of common oil of vitriol, or sulphuric acid. The mixture is then boiled at a very high tempera-

ture, when common brown sugar is produced, held in solution of course, with the acid. A quantity of common chalk is now thrown in, which has the effect to remove the vitriol from the sugar, the vitriol uniting to the chalk, and falling with it as sediment, to the bottom of the boiler. The liquid sugar is then drained off into another vessel, boiled down to molasses, and finally crystallized and clarified in the usual manner.—*N. Y. Courier*.

WINTER FLOWERS AND WINTER GARDENS.

THE treatment of house plants is very little understood, although the practice of keeping shrubs and flowers during the winter is almost universal. It is important that the physiological principles on which success depends should be fairly understood, and then cultivators can apply them with success in all the varying circumstances in which they may be called to act.

Two objects are proposed in taking plants into the house, either simple protection, or the development of their foliage and flowers during the winter. The same treatment will not do for other objects. Indeed the greatest number of our acquaintance treat their winter plants from which they desire flowers, as if they only wished to preserve them till the spring; and the consequence is, that they have very little enjoyment in their favorites.

TREATMENT OF HOUSE PLANTS DESIGNED SIMPLY TO STAND OVER.—Tender Roses, Azaleas, Cape Jessamines, Crape Myrtles, Oranges, Lemons, Figs, Oleanders, may be kept in a light cellar, if frost never penetrates it.

If kept in parlors, the following are the most essential points to be observed. The thermometer should never be permitted to rise above 60 or 65 degrees, nor at night to sink below 40 degrees. Although plants will not be frost-bitten until the mercury falls to 32 degrees, yet the chill of a temperature below 40 degrees will often be as mischievous to tender plants as frost itself. Excessive heat, particularly a dry stove heat, will destroy the leaves almost as certainly as frost. We have seen plants languishing in a temperature of 70°, (it often rising 10° higher,) while the owners wondered what could ail the plants, for they were sure that they kept the room warm enough.

Next, great care should be taken not to over-water. Plants which are not growing require very little water. If given, the roots become sogged or rotten, and the whole plant is enfeebled. Water should never be suffered to stand in the saucers, nor be given always when the top soil is dry. Let the earth be stirred, and, when the interior of the ball is becoming dry, give it a copious supply, let it drain through thoroughly, and then turn off what falls into the saucer.

PLANTS DESIGNED FOR WINTER-FLOWERING.

It is to be remembered that winter is naturally the season of rest for most plants. All plants require to lie dormant during some portion of the year. You can not cheat them out of it. If they are pushed the whole year, they become exhausted and worthless. Here lies the most common error of plant keepers. If you mean to have roses, blooming geraniums, etc., in winter, you must, artificially, change their season of rest. Plants which flower in summer must rest in winter; those which are to flower in winter must rest either in summer or autumn. It is not usually worth while to take into the house for flowering purposes any shrub which has been in full bloom during the summer or autumn. Select and pot the wished for flowers during summer; place them in a shaded position facing the north, give them very little water, and then keep them quiet. Their energies will thus be saved for winter. When taken into the house, the four essential points of attention are light, moisture, temperature, and cleanliness.

1. *Light.*—The functions of the leaves can not be healthfully carried on without light. If there be too little, the sap is imperfectly elaborated, and returns from the leaves to the body in a crude, undigested state. The growth will be coarse, watery,

and brittle, and that ripeness which must precede flowers and fruits can not be attained. The sprawling, spindling, white-colored, long-jointed plants, of which some persons are unwisely proud, are often the result of too little light and too much water. The pots should be turned around every day, unless when the light strikes down from above, or from windows on each side; otherwise they will grow out of shape.

2. *Moisture*.—Different species of plants require different quantities of water. What are termed aquatics, of which the *Calla æthiopica* is a specimen, require great abundance of it. Yet it should be often changed even in the case of aquatics. But roses, geraniums, etc., and the common house plants, require the soil to be moist rather than wet. As a general rule, it may be said that every pot should have one-sixth part of its depth filled with coarse potsherds, as a drainage, before the plants are potted. This gives all superfluous moisture a free passage out. Plants should be watered by examination, and not by time. They require various quantities of moisture, according to their activity, and the period of their growth. Let the earth be well stirred, and, if it is becoming dry on the inside, give water. Never water by dribblets—a spoonful to-day, and another to-morrow. In this way the outside will become bound, and the inside remain dry. Give a copious watering, so that the whole ball shall be soaked; then let it drain off, and that which comes into the saucer be poured off. But, in whatever way one prefers to give water, the thing to be gained is a full supply of moisture to every part of the roots, and yet not so much as to have it stand about them. Manure-water may be employed with great benefit every second or third watering. For this purpose we have never found any thing equal in value to guano. Besides water to the roots, plants

are almost as much benefitted by water on the leaf—but of this we shall speak under the head of cleanliness.

3. *Temperature*.—Sudden and violent changes of temperature are almost as trying to plants as to animals and men. At the same time, a moderate change of temperature is very desirable. Thus in nature there is a marked and uniform variation at night from the temperature of the day. At night, the room should be gradually lowered in temperature to from 45 to 50 degrees; while through the day it ranges from 55 to 70 degrees. Too much and too sudden heat will destroy tender leaves almost as surely as frost. It should also be remembered that the leaves of plants are constantly exhaling moisture during the day. If in too warm an atmosphere, or in one which is too dry, this perspiration becomes excessive, and weakens the plant. If the room be stove-heated, a basin of water should be put on the stove to supply moisture to the air by evaporation.—Sprinkling the leaves, a kind of artificial dew, is also beneficial on this account. The air should be changed as often as possible. Every warm and sunny day should be improved to let in fresh air upon these vegetable breathers.

4. *Cleanliness*.—This is an important element of health as well as of beauty. Animal uncleanness is first to be removed. If ground-worms have been incorporated with the dirt, give a dose or two of lime water to the soil. Next, aphides or green lice will appear upon the leaves and stems. Tobacco smoke will soon stupefy them, and cause them to tumble upon the shelves or surface of the soil, whence they are to be carefully brushed or crushed. If one has but a few plants, put them in a group upon the floor; put four chairs around them, and cover with an old blanket, forming a sort of tent. Set a dish of coals within, and throw on a

handful of tobacco leaves. Fifteen minutes smoking will destroy any decent aphid.

If a larger collection is on hand, let the dish or dishes be placed under the stands. When the destruction is completed, let the larger parlor be well ventilated, unless, fair lady, you have an inveterate smoker for a husband; in which case you may have become used to the nuisance. The insects which infest large collections in green-houses are fully treated of in horticultural books of directions.

Dust will settle every day upon the leaves and choke up the perspiring pores. The leaves should be kept free by gentle wiping, or by washing. H. W. BEECHER.

REMARKS.

All will be glad to see this sensible article, which is extracted from the *Horticulturalist*; it is a practical exposition of the best treatment of parlor plants, too often, alas! parlor victims—for it is almost impossible to arrange the elements of comfort to man and plants, so that neither shall suffer; for though I am always happy in a green-house, I should desire a very different condition and temperature of atmosphere for my parlor. Indeed I have, long since, come to the conclusion, that the cheapest and most satisfactory plan for window or parlor plants, is to purchase them of our gardeners, just as they come into bloom, enjoy their sweets, and then send them back, or throw them away, as the case may be; and it is surprising how much and protracted enjoyment may be furnished by a few dollars judiciously spent in this way.

For those who would render their outer gardens attractive in winter, the next article, taken from the *Gardeners' Chronicle*, is recommended—as furnishing many valuable hints. Some of the plants here named

may prove unsuited to our soil, and others may not be able to withstand the rigor of our climate; but it is hoped that some of our horticultural amateurs will give a trial of the plan suggested, and that they will succeed in rendering the garden less forbidding than it now is at Christmas. The suggestions are certainly worthy of consideration, and our enterprising nurserymen, will, I doubt not, be happy to aid the independent innovator who shall attempt this plan.

EVERYBODY complains of the barren and uninteresting appearance of the flower Garden in winter and early spring. The gay parterre, which in summer boasts of every hue, is tended with the greatest care, the "observed of all observers," becomes in a few short weeks a barren waste, and as far as its real object is concerned a sinecure. Its epitaph might with propriety be written "flat, stale and unprofitable."

At various times and in various periodicals treating on gardening matters, suggestions for obviating this have been thrown out; but the thing never appears to have been taken up with any spirit. Surely it offers a wide field for inquiry, and one on which the results can not but be profitable to all concerned. A winter garden is a desideratum. We can not hope to make

"Winter wear a wreath of summer flowers;" but we have at least the means of binding about his temples, a garland of evergreens, beautifully gemmed with a few stray flowrets, pale though they may be. Appropriateness in garden scenery is one of the first matters claiming attention. Gay flowers and dripping fountains would be out of place in winter, even if we could command them in the open air; but a collection of such attractive plants as put on their gayest dresses at that season, must be to all lovers of gardens a thing to hope for, and admire when obtained.

There can be no reason why a garden establishment should not have a reserve nursery for such plants, equally complete and equally cared for with the frames and pits of Verbenas, Pelargoniums, and the thousand and one kinds of exotics, destined to exhibit their beauties beneath a July sun.

And why should we not prepare for bedding out in November with equal alacrity as in June? In a list which I shall append is an array of names, the representatives of such plants as appear to me suitable for a winter garden. Others will suggest themselves to the readers of the *CHRONICLE* more *au fait* in such matters than myself, and if the thing was once warmly taken up by some of our best horticulturists, we should not long have to complain of barren flower gardens in winter. In removing the plant from the reserve ground to the flower garden, and *vice versa*, season need not be considered as offering any objection. Plants that are constantly being removed, never, under ordinary circumstances, suffer from the treatment. And a bed vacated to night by frost bitten Heliotropes, may, ere the inmates of the mansion look upon the spot to morrow, be occupied with *Gaultheria procumbens*, or some other evergreen appropriate to the situation. It would be impossible to offer any practical hints as to the proper situation for any given evergreen, in arranging a winter garden. Situation, circumstance and individual taste will determine that. My principal object on this occasion is to draw attention to the subject. That once obtained, the thing is done. One or two general observations may, however, be given in introducing such flowering herbaceous plants and bulbs as may be considered necessary, or taste suggest. I imagine that by inserting them among the dwarf young evergreens or on the margin of the beds of the tall ones, a more pleasing effect will be produced than by massing them, unless perhaps exceptions be allowed in *Anemones*, *Hellebore*, and a few other such plants. Gayness, however, should not be the object aimed at. An interesting assemblage of plants is all that can be hoped for; to attempt beyond this would probably lead to effects which must, from the very nature of things prove abortive. Under any circumstance a change in the winter aspect of our flower gardens as they are usually found, must be for the better, with perhaps one exception, that of sticking the beds full of branches of shrubs, in lieu of the living plant.

In the subjoined list, some arrangement is preserved. But any of the taller growing plants could easily be kept dwarf, without formality, by a judicious application of the

pruning knife. In an article of Messrs. Standish and Noble, of Bagshot, which appeared in a recent part of the "*Journal of the Horticultural Society*," allusion is made to a remarkable dwarf section of *Rhododendrons*, some of which have variegated foliage, and all a very compact habit. I have seen some of them in the nurseries alluded to, and think they would be excellent auxiliaries in forming a winter garden. They are of various colors, and the greater part of them are in bloom in April. They can be removed as soon as the flowers are faded, or when circumstances may require. As they would not remain to complete their growth, beds of peat need not be provided for them. In the parterres they would only develop in the form of flowers, matters stored up during the previous season's growth. In the reserve garden, of course, every facility would be afforded them for growth, and to meet the requirements of the ensuing flowering season.

DWARF EVERGREENS.

Variegated Ivys, *Polygala chamæbuxus*, *Erica carnea*, *Pernettya mucronata*, *Daphne hybrida* and *japonica*, *Gaultheria shallon*, *Epigæa repens*, *Juniperus tamaricifolia*, and *squamatus*, *Arbutus pilosa* and *sibirica*.

TALLER PLANTS.

Andromeda floribunda, *Berberis fascicularis* and *aquifolia*, *Aucuba japonica*, *Saurau nobilis*, *Juniperus virginiana* and *Suecia*, *Thirja Warreana* and *aurea*, *Vaccinium ovatum*, *Taxus baccatus* variegat., *Buxus vulgaris*, *Cotoneaster microphylla*, *Jasminum nudiflorum* (for early flowers,) *Arbutus unedo*, *Ilex variegata* and *latifolia*, *Quercus ilex*, *Ruscus aculeatus* and *ramosissimus*, *Rosmarinus officinalis* with silver leaves, *R—— aureus*, *Rhododendron dauricum*, *Euonimus japonicus* and *do.*, variegatus, *Daphne collina*, *Cydonia japonica*.

HERBACEOUS PLANTS.

Alyssum saxatile variegatum, *Helleborus viridis* and *nigricans*, *Galanthus nivalis*, *Scylla verna*, *Saxifraga oppositifolia*, *Gentiana acaulis* and *verna*, *Hepaticas*, *Polyanthus*, *Primulas*, *Auriculas*, *Tussilago farfara*, *Aconitum hyemale*, *Anemone hortensis* and *nemorosa* and varieties, *Crocus sativus*, *Hyacinths*, *Narcissus*, *Jonquills*, *Daisies*, *Cardamine pratense* flo. plen., *Cyclamen europæum*.

LITERARY NOTICE.

RURAL HOMES, or Sketches of Houses suited to American Country Life, with Original Plans, Designs, etc. By GERVASE WHEELER, 300 pp. octavo. Chas. Scribner, 145 Nassau street, New York. Wm. H. Moore, & Co., Cincinnati.

THIS pleasant and useful little book constitutes another offering to the taste and comfort of our countrymen, which may be safely recommended to the attention of all who have a desire to inform themselves upon the important business of house-building, which in our country needs a great deal more study by the masses than it has yet received. Though a nation of builders, it is but too true that there are a great many terrible failures in the resultant buildings erected by the self-architects of our country. A false economy often deprives the professional builder of a *call* from him who would make himself a house—and when consulted, how often does it not happen that the employer forces him to yield to his own crude notions, and oblige him to depart from principles of good taste—then again all are not architects who assume the title.

Mr. Wheeler after announcing his claims to consideration, thus sets himself before the public:—

“I therefore modestly present a few notes of things that in the course of a varied architectural practice have come before me, and which have left certain conclusions impressed upon my mind. In this, I claim no title to originality; others, long ere now, have written useful and learned books about houses, and how to build them; this, however, I do claim—an intention of directing the thoughts of all interested in country life, to the embodiment of a fixed principle in rural architecture.

Heretofore, too generally, country houses have either been on a stereotyped plan, or have shown an unmeaning whimsicality: the true way is, to make the building exactly what its parts, uses, material, and

extent require—ornamental or plain as you will—but every portion suggestive of a meaning and a use.

Perhaps this is more easy to direct than to do; the designs presently following will best show how far in my case the attempt has been successful. I can only urge that they have at least the merit of study; and every plan—the practical value of either having been tested by erection, or of having been reduced from drawings as elaborately drawn out as if for actual use by some cautious and very particular builder.

The contents of the book itself will be found to be but short, simple, and comprehensive directions to all desirous of building—embracing every variety of home usually needed. It commences with the first foot-tread upon the spot chosen for the house; details the considerations that should weigh in selecting the site—gives models of buildings, differing in character, extent, and cost, and suited to particular localities, and to circumstances fully enlarged upon—shows how to harmonize the building with the surrounding scenery, and to reconcile economical expenditure with truest refinement of taste—teaches how healthfully to warm and ventilate—assists in selecting furniture, and the innumerable articles of utility and ornament used in constructing and finishing—with remarks upon the adjuncts to a house—its entrance lodge, and its numerous out-buildings. It concludes with final practical directions to building amateurs, giving a few useful hints as to drawing up written descriptions, specifications, and contracts.”

Mr. Wheeler assumes very sensibly that there may be a difference between a house and a home, and with true philanthropy he strongly recommends our countrymen to erect the latter—and, though willing minds and active hands will oftentimes make a *true home* e'en where there is no house at all, but a mere log cabin, this is only the exception, and the same hands would have rendered a proper edifice much more home-like and loveable.

He thus sets forth the excellencies of a home:—

“CONVENIENT ARRANGEMENT.

FACILITY OF CONSTRUCTION AND OF REPAIR.

PERFECT PROTECTION FROM HEAT AND COLD.

ADEQUATE MEANS OF WARMING AND VENTILATING.

CONGRUITY WITH THE SCENERY AROUND.

In these may be summed up all that has to be studied in the contriving and the building of a house. To discuss with advantage the several points that present themselves under each head, I will suppose a friend about to commence the initiatory steps towards erecting himself a home, and so will first say a few words about selection of the site.

Think more than once, before selecting too large a tract of ground. Space is desirable, undoubtedly; but a ramble in country lanes, and in woods skirting your place, is as pleasant as if in your own grounds, and enjoyed at a far cheaper rate. If you really, soberly understand farming, and wish to devote your time and attention to agricultural pursuits, well and good; purchase, then, just so much land as you feel you can control; or if you have wealth enough to permit you to play at farming, and to raise potatoes at four dollars a barrel, when you can send to the city and buy them at three, and to cultivate other charming crops at a like scale of expense, get as many broad acres as you have a mind to; but for the particular spot where you mean to put your house, choose as follows:

Rather prefer a quiet, smiling, little nook, with a rolling surface of natural grassy slopes, tenderly shaded with many trees, than a rocky, bare quasi-picturesque territory.

Notice particularly how you are sheltered by hills around, from the quarter whence cometh the wintry wind, and so prefer rather the gentle slope of a long hill to its summit. * * *

On the summit of the hill, water is difficult to be obtained without great expense; on the side it may be found in abundance. On the summit, stone and sand, and timber have all to be slowly and painfully hauled from below; on the side, perhaps, all of the materials may be almost at hand, and, at any rate, are more easily reached.”

I must confess a preference for the hill top—give me the elevated point whence to look down upon the smiling plain and river stretching afar off into the distance—not merely for the sake of the beautiful displays of *Chiar-oscuro*, which Mr. Wheeler admits to be very attractive. The foreground you may always arrange and control, and should render as beautiful as possible, but the distant prospect is reserved for the favored points of elevation.

The chapter upon the selection of materials and how suited to particular styles is especially commended to western builders.

“In choosing your materials you are, of course, influenced by the selection your neighborhood affords. Wood and stone are those generally used; brick not being introduced so often into country buildings as I think it might be with great advantage.

For a house on a very large scale, wood seems unsuitable, because in a greater or less degree, it is suggestive of temporary intention in the erection.

Stone is of many characters, and needs varied treatment. Its use is often a source of very great expense, where a character is attempted the particular specimen of material will not allow.

Brick does not seem as yet to have had a fair chance of trial: and though, where stone and timber are in abundance, I would not of course prefer its adoption; still there are many places in this country where it is both cheap and readily obtained, and in such places I conceive a far better use might be made of it than has, so far as my personal observation goes, been attempted.

The principles and practice of ventilation are admirably set forth in the 4th chapter, in which may be found the following very sensible remarks:

“A comfortable home must be both a warm and a sweet one.

Its warmth is dependent in winter upon its provisions for artificial heating; its sweetness, at all seasons, upon its ventilation, its thorough comfort, upon both.

Dicken’s “Household Demon,” an air

tight stove, will afford the one, so far as certain degrees of the thermometer are any indication, and an open door and window, when its hot breath has become a little too searching, will, according to generally received country practice, supply the other.

The cold air thus admitted is soon weakened by its battling with the stifling heat, and another reinforcement from without becomes necessary; and so, in severe weather, the temperature is constantly jumping from extremely hot to extremely cold. After a while, the decomposed air gathers upon the ground, where its weight has taken it, and heaps itself up, layer upon layer, until it reaches the mouth and nostrils of those sitting in the room, who, in every eighteen respirations, inhale in the course of a minute, a gallon of stuff so foul as, could it be made sensible to sight in the form of a refreshing draught, would fill them with loathing and dismay.

With an open fire, the evil is somewhat lessened, but not removed; with a furnace it is changed. What is to be done? Would you cut off all means of artificial warming? Certainly not; but in warming—*purify!*

The simple principle upon which this purification must be effected is this: Provide a means for withdrawing the debris of every gallon of warm air you admit.

A very simple means of ventilating a room only occasionally used, is by placing a lighted lamp in an ordinary flue, providing the aperture with one of Arnott's valves to prevent downward draught. The heated air from the combustion of the lamp will produce an upward current, and thus ventilate the room without in any way producing increase of temperature by the burning of the lamp.

Chambers immediately under the roofs of country houses are frequently rendered scarcely habitable, in consequence of the heat.

This excessive heat may be greatly lessened by making a double roof; that is by furring out a space all over the roof, from the underside of the rafters to the line of the ceiling. This space, say of about a foot deep, would, if made perfectly tight, afford a stratum of dead air, than which a more perfect non-conductor can not be found. External heat could not penetrate through this double roof, and in cold

weather, internal warmth would not be lessened by contact with cold inner surface of the roof."

In the concluding chapter he speaks of architecture as a Fine Art, and draws the picture of what an American village should be, which has been fairly and severely criticised.

"The influence that buildings so devised would have in educating public taste is incalculable. Scarcely a rural hamlet, where one house evincing some care in its design and treatment has been newly built, but its effect upon subsequent erections has been most marked. First one neighbor, then another, has discovered his own homestead requires refreshing; perhaps, merely to the extent of fresh painting, and a new roof; ideas for both of these are taken from the new model, and it may be somewhat ludicrously and inconsistently applied. Then another resident determines to rebuild, and his own experiences being enlarged, and a higher standard of taste erected for measuring his ideas of excellence, a very different structure is probably contemplated than he would ever have thought of at first. It is curious to see how any peculiarly marked features, or unusual details, are renewed in each fresh copy from the first new house that is built in a manner different from those usually seen in any small rural community. This remark equally will apply to the buildings of the middle ages, it generally being the fact that ecclesiastical architecture, when in its most glorious growth, developed itself alike all over a certain range, the mother church of the diocese almost universally serving as a type for the lesser buildings. Hence the gathered beauties of delicate spires in one county of England, and the quaint and battlemented towers of another; so, every where it seems, that the first presentation of any thing simply beautiful to the rural public, is instantly seized upon, and reconstructed in as varied ways as individual appreciation, circumstances, and means suggested. How careful then should those persons be who first attempt the introduction of an article of taste in a remote and simple district.

Common schools, improved means, cheap literature, unshackled freedom for acquirement of knowledge and advancement in po-

sition—all these are weighty advantages on the side of this people; and working on a better intelligence and appreciation, the benefit to be derived will be incalculably greater. Every heart is more or less alive to the impressions of beauty—when joined with utility it has an irresistible appeal, and it is not unfair to suppose that in this country, with Nature's simple or grand beauties scattered every where for contemplation, a more ready perception and appreciation may be counted upon than in cities. This may not every where be the case, but as a general rule it probably is; and at all events, in the country, there being less to distract, the quiet, unobtrusive lessons of constructive beauty can not fail to work a quicker way.

But, not only cottages and cottagers are to be thus benefited; the country man-of-wealth, the professional man, the merchant, and the parson—all may be made wiser and better. "Sermons in stones," I have always read with its liberal meaning, and think an architect has a great and noble privilege in his power to preach by his works lessons of refinement, harmony and beauty. The pertinacity with which every newly built house, if in any respect out of the common way, is discussed, the curiosity shown by the strollers around it during the progress of the works, and very speedily the avidity with which any scrap or morsel of peculiar detail is seized upon and copied, are proofs of the awakened interest it excites. When the finished whole stands fair and full before them, many a pilgrimage is made from some distant spot to contemplate its finish and proportions, and its beauties sink into no unfertile soil. And how with its occupants? The teaching influence soon shows its effects. The furniture, the internal plenishing and details take a tone from the dwelling. Articles in improved taste are demanded from the country store, or perhaps sent for from the distant city. There are some inquired for by others, and the building of one moderately good house (good in artistic taste) will often occasion the introduction of a thousand commodities of a better taste into a rural community. Perhaps the house has a quiet simplicity about it that shames the lovers of gaudy carpeting and showy upholstery into a better taste; perhaps its

arrangement of rooms suggests an amended and more refined adjustment of domestic economy; a little plant cabinet has perhaps forced the love and attention necessary for the culture of a few flowers; a retired, quiet, little book-room, if merely, perhaps, from the pleasant view commanded by its windows, has tempted occupancy in an unbusy hour, and the mind, calm and unhindered by household cares, has found leisure to strengthen itself by inward contemplation or the study of books. Numberless are the methods by which this wholesome influence will work—lasting and limitless are its effects."

His remarks upon schools are very much to my mind, and their study or rather, their application in our rural districts would be conducive of great good to the rising generation. Even in this city so famous for its common school system, there is a terrible lack of consideration for the application of ornament and proportion.

"It has often seemed to me a matter of regret that country school-houses are not more generally made prettier objects. Rude, often incommodious, and generally situated in by no means a pleasant site, they have only their admirable intention to recommend them. With the number of books that have from time to time appeared on school architecture, one would have thought ere this that some more matured fruit would have been seen, but yet ever present stands the bald, white, pedimented out-building, without porch, veranda, or inclosure of any kind; severe temples of learning to the little scholar, when they might be cheerful, smiling homes of the heart! But time, the great essential, is the only commodity wanted by the people of this country to do this and many good things; in the course of a few years the lessons they are teaching themselves will be fully learnt, and then the importance of rural architecture as an art, and its influence on mind and manners will be fully seen and acted on.

HORTICULTURE, or gardening, is the first kind of employment on record; and that in which man was engaged while in a state of perfection and innocence.—*Dr. A. Clarke.*

TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY.

THE meetings during the past month have been characterized by some spirited discussions chiefly on *polity* and *business*, all which had better be entrusted to the council as our business agents, so as to leave the way open for the dissemination of useful, practical and scientific information among the members at the regular meetings. It is much better that the discussions should be confined entirely to purely horticultural topics, and then the meetings would be infinitely more useful and more attractive to the community than when dollars and cents and other vulgar arguments constitute the fiber of our consultations. May we not hope for an amendment in this particular? Let us live in hope!

Fruits have been exhibited in considerable numbers and have elicited some useful remarks. They were chiefly from New York State, and present quite different characters from those of the same kinds cultivated here—many were unknown to our orchardists and committee men, who eagerly embraced the opportunity of tasting and studying them.

Grapes, from H. H. Coit, Esq., of Cleveland, O., were presented on the 15th, they were declared to be the Isabella.

Catawba, very fine bunches and in a state of perfect preservation were shown on the 8th of November, by S. Rintz, and the Secretary expressed his thanks for the privilege of carrying them away. On the same day some magnificent bunches of Isabella were presented by T. V. Peticolas.

Seeds.—Japan peas, were distributed on the 1st by John Lea, from his brother at Alton. He handed in the following note explanatory of their history; the botanical

classification of the plant was not recognized;—

"This pea was brought into San Francisco near a year since, by an American ship, which took off the crew of a Japan vessel in distress, and carried them into that port.

Dr. Edwards, of Alton, Ill., brought a few of those peas home with him, six of which he gave to James H. Lea, of that place, all of which grew, and the specimens herewith presented by him to this society.

The pea resembles a kidney bean, *flattened*, when green, and becomes round at maturity; it resembles green peas in taste. The stem is very hard resembling wood. It should be planted a foot apart.

JOHN LEA."

A vote of thanks was passed to Jas. H. Lea for his contribution.

R. Shoemaker showed 1861 grains of black barley grown from one seed sown last November—the grains were very plump and fine.

Mr. Longworth sent in large quantities of grape seeds of different kinds, which were freely distributed among those who intended competing for the large prizes offered by the society for seedling grapes. [See Schedule.]

Tea seeds, with Dr. J. Smith's pamphlet were sent in by Dr. Daniel Drake.

Flowers have been rather scarce during the past month, but one a specimen plant by S. S. Jackson, is worthy of special notice; it was one of his seedling Azaleas, in full bloom. It is the same plant exhibited in bloom at the fall and spring shows, and which, he says, has continued to blossom ever since; it now has several buds, indicating a perpetual character which is supposed to be new with this family. Mr. J. stated that this plant, which has the dwarf habits of *Variegata*—is a seedling

from it, crossed by Prince Albert; it is quite a desideratum, flower large, regular, deep rose, with darker purplish spots in the upper petal.

A correspondence was directed to be opened with other societies, upon the times for the next year's autumnal Fairs—with a view to avoid clashing or interfering.

Several communications of interest were received during the month.

Publications.—“THE NEW YORK STATE AGRICULTURAL SOCIETY'S TRANSACTIONS,” a handsome volume, was received from the Secretary, B. T. JOHNSON, of Albany; also, “THE TRANSACTIONS OF THE MICHIGAN SOCIETY,” from their Secretary, J. C. HOLMES, of Detroit—to both of whom a vote of thanks was tendered. The other regular periodicals were received as usual.

A wine examination was ordered to be held on Saturday, the 29th, at which samples of the three years 1849, 1850, 1851 were to be presented. Mr. Buchanan stated that as the pamphlet on Grape Culture was nearly out of print, he contemplated issuing a new edition; and he therefore desired communications from all engaged in the business, of any valuable information they may have to contribute, in order to render the book as complete as possible.

Messrs. McWilliams, Jackson, Carter, Davies, Graham, Foote, and W. Cox, were appointed a committee on Premium List, for the next year, who reported the following:

Prize List for the year 1852,

Adopted by the Cincinnati Horticultural Society, November 29, 1851.

RULES AND REGULATIONS.

1st. All articles must be the production of the person in whose name they are exhibited.

2d. All plants for competition must be in flower, unless where exceptions are made in the prize list.

3rd. All Seedlings of Fruits, Flowers or

Vegetables will receive gratuities, if deemed worthy.

4th. Specimens of Rare Plants, or collections other than those named in the list, will receive gratuities, if deemed worthy.

5th. No collection of Fruits, Flowers, Vegetables, or Ornamental Designs, will be allowed to compete for more than one prize, and the articles must be marked so as to designate what prizes are competed for.

6th. The Council shall have the privilege of discarding any article unworthy of exhibition; and should there be but one competitor for a prize, the Judges may decide if entitled to the prize, grant a gratuity, or withhold the premium if the article be not meritorious.

7th. Should, from unavoidable causes, satisfactory to the Council, any article or collection arrive after the time named, and before the awards of the Judges, they may decide as to their admission, or, if too late for competition, the Judges may grant a gratuity if deemed worthy.

8th. It shall be optional with the persons to whom money is awarded to receive the amount in plate if preferred.

9th. All competitors, who are not members of the society, are expected to pay a recording fee, of one dollar for a single article, and two dollars for a collection; and otherwise conform to the rules and regulations.

10th. All articles intended for competition on the show days must be reported to the Council or their agent, with the prizes named for which they are intended to compete, the day before the exhibition, and put into their proper places; except cut flowers, with such other perishable articles as in the judgment of the Council should be delayed; but in no case can any article be received for competition after four o'clock, P. M., of the first day of the exhibition, in order that the Judges may award the prizes previous to admitting the public, which will be at seven o'clock in the evening. No person, except the Judges, shall be admitted in the rooms, while the Committee are examining articles and awarding premiums.

11th. All articles, excepting living plants, shall be considered as the property of the society and shall be sold or disposed of for its benefit.

12th. The amount of all premiums not claimed or awarded in competition shall be, under the control of the appropriate com-

mittees, to be used as gratuities for meritorious articles not specially enumerated.

NOTE.—The term Display shall in all cases be construed to mean the greatest number of best varieties in the best condition, without regard to the number of specimens of each kind, unless when otherwise expressed.

The Committees to have the power to award a copy of the Western Horticultural Review for one year in lieu of any three dollar prize;—and a copy of the same work for two years in lieu of any of the prizes of \$5.

Time of the Exhibitions.

Spring Exhibition, May 12.

Fall Exhibition, September 29.

FRUITS.

STRAWBERRIES—

For the best and earliest pint, . \$2 00

2d " " " . 1 00

Best 6 varieties, 1 pint each, . 3 00

Best display in variety of good quality during the season, " . 4 00

RASPBERRIES—

Best and earliest pint exhibited, . 2 00

2d " " " . 1 00

Best display during the season, . 3 00

CHERRIES—

Best 5 varieties, 1 pint each, . 5 00

Best and earliest pint, . 2 00

Best display during the season, . 3 00

GOOSEBERRIES—

Best and earliest pint, . 2 00

2d " " " . 1 00

Best display during the season, . 3 00

CURRENTS—

Best 2 varieties, 1 quart each, . 2 00

2d best, . 1 00

Best display during the season, . 3 00

APRICOTS—

Best and earliest, a dozen, . 2 00

2d " " " . 1 00

FIGS—

Best and earliest exhibited, . 2 00

2d " " " . 1 00

Best display during the season, . 3 00

NECTARINES—

Best and earliest, 6 exhibited, . 2 00

2d " " " . 1 00

PEARS—*First Saturday in August.*

Best three varieties, 3 each, . 3 00

2d " " " . 2 00

APPLES—*First Saturday in August.*

Best three varieties, 12 each, . 2 00

2d " " " . 1 00

APPLES—*First Saturday in September.*

Best four varieties, . . . \$3 00

2d " " " . 2 00

PLUMS—*First Saturday in September.*

Best 6 varieties, not less than 6 each, 4 00

2d " " " . 2 00

PEACHES—*First Saturday in August.*

Best 3 varieties, not less than 6 each, 3 00

2d " " " . 2 00

PEACHES—*First Saturday in September.*

Best 6 varieties, not less than 6 each, 4 00

2d " " " . 2 00

Best display, . . . 8 00

2d " " " . 4 00

BLACKBERRIES—

Best quart, . . . 1 00

FALL EXHIBITION.

PEARS—*First Saturday in August.*

Best six varieties, 6 each, . \$5 00

2d " " " . 3 00

Best display, . . . 8 00

2d " " " . 4 00

APPLES.—

Best 10 varieties, not less than 6 each, 8 00

2d " " " . 6 00

Best display, . . . 10 00

2d " " " . 5 00

QUINCES—

Best half peck. . . 2 00

2d " " " . 1 00

GRAPES (Hardy)—

Best three varieties, 6 bunches each, 5 00

2d " " " . 8 00

Best display, . . . 6 00

2d " " " . 4 00

GRAPES (Foreign varieties)—

Best bunch, . . . 3 00

2d " " " . 2 00

Best three varieties, 2 bunches each, 5 00

2d " " " . 3 00

Best display, . . . 6 00

2d " " " . 4 00

WATERMELONS—

Best three, . . . 2 00

2d " " " . 1 00

MUSKMELONS—

Best two, . . . 2 00

2d " " " . 1 00

ASSORTED FRUITS—

Best and most beautifully arranged collection, . . . 5 00

2d best ditto, . . . 3 00

Best contributor during the year, 10 00

FLOWERS.

CAMELLIAS,—First Saturday in Feb.	
Best 6 varieties,	\$3 00
2d best "	2 00
AZALEAS,—First Saturday in March.	
Best 6 varieties,	3 00
2d best "	2 00
TULIPS,—	
Best display of varieties, in bloom,	2 00
2d best " " "	1 00
HYACINTHS,—First Saturday in March.	
Best 12 varieties, in pots,	2 00
2d best "	1 00
AURICULAS,—	
Best 3 varieties, in pots, 2 each,	2 00
SPRING EXHIBITION.	
CACTI,—	
Best 6 varieties, in pots,	\$3 00
2d best " "	2 00
SWEET WILLIAMS,—	
Best 3 varieties, double,	1 00
VERBENAS,—	
Best 12, in pots,	3 00
2d best "	2 00
PETUNIAS,—	
Best 6 varieties, in pots,	2 00
2d best 6 varieties, in pots,	1 00
ANTIRRHINUMS,—	
Best 6 varieties, in pots,	2 00
2d best " "	1 00
PHLOXES,—	
Best 10 varieties, in pots,	2 00
2d best " "	1 00
PANSIES,—	
Best 12 varieties, in pots,	3 00
2d best " "	2 00
Best display,	3 00
CINERARIAS,—	
Best 6 varieties, in pots,	2 00
2d best " "	1 00
ROSES,—	
Best 24 varieties, in pots,	5 00
2d best " "	3 00
Best 6 Bourbons,	3 00
" 6 Tea,	3 00
" 6 Noisette,	3 00
" 6 Bengal,	2 00
Best 12 Remontants, cut flowers,	3 00
2d best of each, a diploma.	
FUCHSIAS,—	
Best 6 varieties, in pots,	3 00
2d best " "	2 00
Best 3 " "	2 00
2d best " "	1 00
Best specimen plant,	1 00

CALCEOLARIAS,—(Shrubby,)

Best 3 varieties, in pots,	\$2 00
2d best " "	1 00
Best 10 var., in pots, (<i>Herbaceous</i>),	4 00
2d best, " "	2 00
PELARGONIUMS,—	
Best display,	8 00
2d best "	5 00
Best 12 scarlet,	6 00
2d best "	4 00
Best 3 scarlet, in bloom,	3 00
ROSES, Hardy annual,—	
Best display,	3 00
2d best "	2 00
TREE PEONIAS,—	
Best specimen, in pot,	1 00
BALSAMS,—	
Best display,	2 00
HARDY HERBACEOUS PERENNIALS.	
Best display, in pots, 12 or more,	4 00
2d best " " "	2 00
ANNUALS,—	
Best display, 12 or more, in pots,	4 00
2d best " " "	2 00
STOVE AND GREENHOUSE PLANTS,—(In flower, and excluding all varieties for which special premiums are offered,)	
Best collection, not less than 20,	12 00
2d best " "	6 00
3d best " "	4 00
Best specimen plant,	1 00
Best 12 varieties,	6 00
2d best "	4 00
Best 6 varieties,	3 00
2d best "	2 00
BOUQUETS,—	
Best pair hand Bouquets, round or pyramidal,	3 00
2d best " " "	2 00
Best pair flat " (9 inch,)	2 00
2d best " " "	1 00
Best display of all kinds,	4 00
2d best " "	2 00
CUT FLOWERS,—First Sat. in June.	
Roses. Best 10 varieties,	2 00
PINKS. Best 6 varieties,	1 00
CARNATIONS. Best 6 varieties,	2 00
PICOTEES. Best 6 varieties,	2 00
PRAIRIE, and other hardy climbing	
Roses, best display,	2 00
Best specimen flower,	1 00
HOLLYHOCKS,—First Sat. in July.	
Best display,	2 00

FALL EXHIBITION.

ANTIRRHINUMS,

Best 6 varieties, in pots, . . .	\$2 00
2d best " " " . . .	1 00

ROSES,

Best 24 varieties, in pots, . . .	5 00
2d best " " " . . .	3 00
Best 12 " " " . . .	3 00
2d best " " " . . .	2 00
Best 6 " " " . . .	2 00
2d best " " " . . .	1 00
Best specimen plant, of a new variety, . . .	2 00
Best display of cut roses, . . .	3 00
2d best " " " . . .	2 00

STOVE AND GREENHOUSE PLANTS,

—In pots as at the Spring Exhibition.

Best collection, not less than 20 varieties, in bloom, . . .	15 00
2d best " " " . . .	10 00
Best 12 varieties, . . .	7 00
2d best " . . .	4 00
Best 6 varieties, . . .	3 00
Best specimen plant, in bloom, . . .	1 00

ANNUALS,—

Best display, in pots, in bloom, . . .	2 00
2d best " " " . . .	1 00

BOUQUETS,—

Best display, . . .	5 00
Best pair hand Bouquets, round or pyramidal, . . .	2 00
Best pair flat " . . .	1 00
Best pair grass in moss vases, . . .	3 00
2d best " . . .	2 00
Best pair composed of indigenous flowers, . . .	2 00

FLORAL DEVICES,—

Best, . . .	7 00
2d best, . . .	4 00

EVERGREEN WREATHS—

Best 6 floral hoop wreaths, 20 in. diam.	3 00
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DESIGNS, ETC.,—

Best model of ornamental grounds, a copy of Downing's landscape gardening, and . . .	6 00
2d best, do do . . .	4 00
Best design for rustic arches, seats, buildings, etc., . . .	4 00
2d best . . .	2 00

DAHLIAS,—

Best 24 var., cut flowers, . . .	5 00
2d best, " " . . .	3 00
Best 12, " " " . . .	4 00
2d best, " " " . . .	2 00
Best 6 " " " . . .	2 00

PHLOXES,—

Best 10 var., in pots, . . .	\$2 00
2d best, " " . . .	1 00

PANSIES,—

Best display, cut flowers, . . .	2 00
2d best, " " . . .	1 00

VERBENAS,—

Best 12 var., in pots, . . .	3 00
2d best, " " . . .	2 00
Best 24 cut flowers, . . .	2 00

PENTUNIAS,—

Best 6 var., in pots, . . .	2 00
2d best, " " . . .	1 00

ASTERS,—

Best 12, in pots, . . .	2 00
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COXCOMBS,—

Best 12, in pots . . .	2 00
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HARDY HERBACEOUS PERENNIALS,—

Best display, during the summer, cut flowers, . . .	3 00
2d best, " " . . .	2 00

CHRYSANTHEMUMS,—*First Saturday in Nov.*

Best 12 varieties, in pots, . . .	3 00
Best 12 " cut flowers, . . .	2 00
Best specimen plant, in pot, . . .	1 00

VEGETABLES.

LETTUCE,—

Best 6 heads, (spring exh.) . . .	1 00
Best 3 var. 6 heads, . . .	2 00
2d best " " . . .	1 00

RHUBARB,—

Best 12 stalks, . . .	2 00
2d best " . . .	1 00

CUCUMBERS,—*1st Saturday in March.*

Best 2 var.	3 00
Best pair, at spring exhibition, . . .	1 00

RADISHES,—*1st Saturday in February.*

Best 25	1 00
Best 3 var., 25, each (spring exh.) . . .	2 00
2d best, " " . . .	1 00

CAULIFLOWERS,—*Spring Exhibition.*

Best 4,	2 00
2d best,	1 00

CABBAGE,—

Best 2 var., 4 each, (spring exh.) . . .	2 00
2d best, " " " . . .	1 00
Best 6, 1st Saturday in April, . . .	1 00
Best 6, drumhead, (fall exh.) . . .	1 00
" " savoy, " . . .	1 00
" " red, " . . .	1 00

ASPARAGUS,—1st Saturday in March.

Best 25 stalks, \$2 00

Best 3 bundles, 25 each, (spring ex.) 2 00

2d best, " " " " 1 00

SPINACH,—1st Saturday in March.Best $\frac{1}{2}$ peck 1 00

Best peck, (spring ex.) 1 00

POTATOS—Spring Exhibition.Best $\frac{1}{4}$ peck 3 00

2d " " 1 00

LIMA BEANS,

Best quart, 1 00

SNAP BEANS—Spring Exhibition.Best $\frac{1}{2}$ peck 2 00

2d " " 1 00

PEAS,Best and earliest $\frac{1}{2}$ peck 2 00

2d " " " " 1 00

TOMATOS—1st Saturday in July.

Best 12 1 00

SWEET POTATOS—1st Saturday in July

Best 12 tubers 1 00

SWEET POTATOS—Fall Exhibition.

Best display 2 00

2d " " 1 00

GREEN CORN,—1st Saturday in July.

Best 12 ears, sugar corn 2 00

Best 12 ears, (fall ex.) 2 00

Best 2 varieties, ripe, garden or field,

24 ears, 3 00

SNAP BEANS—Fall Exhibition.Best $\frac{1}{4}$ peck 2 00

2d " " 1 00

POTATOS—Fall Exhibition.

Best display 4 00

2d " " 2 00

1st and best peck of 1852 1 00

TOMATOS—Fall Exhibition.

Best display 2 00

2d " " 1 00

EGG PLANTS—

Best display 2 00

2d " " 1 00

SQUASHES—

Best 3 varieties 2 each 2 00

PUMPKINS—

Best 2 varieties 2 each 2 00

2d " " " " 1 00

BROCOLI—

Best 6 heads 3 00

2d " " " 2 00

VEGETABLES IN VARIETY—

Best display 10 00

2d " " 5 00

TURNIPS—

Best peck \$1 00

ONIONS—

Best peck 2 varieties 2 00

2d " " " " 1 00

BEETS—

Best 12 roots 1 00

PARSNIPS—

Best 12 roots 1 00

CARROTS—

Best 24 roots 1 00

PEPPERS—

Best display 1 00

SALSIFY—

Best 24 roots 1 00

CELERY—1st Saturday in December.

Best 6 stalks 2 00

ADDITIONAL PREMIUMS.

For a new seedling Potato, better than any now in cultivation in this vicinity, \$6.

Not to be awarded this year.

For a cheap, practical, and efficient remedy against the depredations of the *Curculio* on fruit, within this county, \$100.

For a new seedling hardy dark grape, superior, in all respects, to the Isabella, a better bearer, and ripening its fruit perfectly, Mr. N. Longworth offers a premium of \$100.

Of the next two premiums on seedling grapes N. Longworth, who proposed them, generously offers to pay one half whenever the Society shall award them, subject to the directions reported: See W. H. Review, Vol. I., p. 539.

For a new, seedling, hardy grape, superior in all respects, for the manufacture of wine, to the Catawba, equally productive, as hardy and vigorous of growth, and as great and certain bearer, \$500.

For a hardy seedling table grape, decidedly superior in all respects to any hardy table grape now known to the society, and the vine of vigorous growth, and a fair bearer, \$200.

AMERICAN WINE GROWERS' ASSOCIATION.

THE AMERICAN WINE GROWERS' ASSOCIATION have held two meetings since the last report of the agreeable visit to Latonia. They were on October 11th, and November the first.

The first of these was held to examine some samples sent by H. H. Coit, Esq., of Cleveland, Ohio. They were considered to be sweetened, but as there was no communication explanatory of their manufacture, this was conjectural. Contributors would confer a favor by sending a history of their wines.

One of the specimens was considered to have a fine flavor, and it was suggested that it would be valuable for mixing with *Isabella* in the manufacture of sparkling wines.

At the next meeting, the Association examined specimens of different years, sent in by Mr. Greener, of Mill Creek Township. The Committee on Vineyards continued to report progress, but their labors are not completed. They endeavor to collect all the statistics of the vine and wine culture in the neighborhood.

STRAWBERRIES.—A BANTER.

DR. WARDER: I discover by an article in the Patent Office Report of the present year, that it is admitted east, that "Strawberries are of two kinds, Staminate and Pistillate." That "the latter can not be relied on for good crops, without the fertilizing presence of the former. But with their presence they are usually the best." He says "the best Staminate sorts, are the Large Early Scarlet, and Boston Pine. The best Pistillates are Burr's New Pine, Hovey's Seedling, old or Cincinnati Hudson, and in some localities the Black Prince." Wonderfully accurate. The Early Scarlet, and Boston Pine are both Hermaphrodite, and therefore bear more or less perfect fruit. The writer says, "Pistillates can not be relied on for good crops, without fertilizing." I will give \$50 for a root of either of the Pistillates he names, or any other, that will in one year in one hundred, produce one perfect fruit from twenty blossoms without fertilizing. I have never seen one. There are four distinct plants produced from seed, and they never change their character.

First, Staminate. Never bear a perfect fruit.

Second, Pistillate. Never bear a perfect fruit without impregnation.

Third, Hermaphrodite. Always bear more or less perfect fruit and more or less defective ones. These, from last year's experience, I discover, require insects to carry the Farina, to secure the best crop they can produce.

Fourth, A plant bearing Staminate, Pistillate and Hermaphrodite blossoms. Plants of this class are very rare. Schneike's Garden of Eden Seedling, is in part, of this character, and for three years has produced a full crop of large, perfect fruit, and of fine quality. It is the only one which I have seen that all its blossoms bear perfect fruit.

I have not yet seen on these plants a blossom purely Staminate. All are purely Pistillate, or Hermaphrodite, and perfect in both organs.

N. LONGWORTH.

Cincinnati, Dec. 20, 1851.

SONGS OF THE HEART AND THE HEARTHSTONE.

BY REBECCA S. NICHOLS.

THIS is a beautiful book, which does great credit alike to our enterprising publishers, binders, and printers, as well as to the kind feelings of those who have so handsomely complimented the gifted authoress, by issuing so pretty an edition of her fugitive pieces, which are thus to be embalmed and preserved in a more durable form, and infinitely more attractive than that in which they have appeared from week to week in the columns of the Commercial newspaper.

This work has been published by subscription, and as the price for so handsome a book is as low as could be asked, I shall beg leave to direct the attention of the public to the fact that they may still have an opportunity of securing it at the subscription price, by calling at J. F. DESILVER'S Bookstore, 121 Main street, where the book may be seen, and will be for sale.

We have Corn Rhymes, and even Barnyard Rhymes—why may we not, also, have Garden Rhymes? What say you, Mrs. NICHOLS?

As a specimen of the work, the following stanzas, taken almost at random, are selected, seasonable as well as beautiful—though tinged with that air of subdued sadness, which can be fully experienced only by a mother, who has been stripped of her darlings. They are from the "Foot-Prints of Winter."

Foot Prints of Winter.

Hark! how wild the winds are sighing,
Moaning, fretting, shrieking, dying,
And the helpless leaves are flying
Madly on their way:
For awhile the AUTUMN rested,
And the death-white frosts he breasted
Till his hoary front was crested—
Crested with decay!

Through the long and narrow arches
Of the bare yet graceful larches,
Solemnly and slowly marches

Winter and his train:

At his tread the grass grows crisp,
And each mother's petted lisper,
Shrinking from the air will whisper

"That the cold is pain!"

Days are into darkness shrinking,
Clouds into the earth are sinking,
And the icy fetters, linking,

Bind the shallow streams:

SPRING's sweet hours of sunshine slowly,
SUMMER twilights, soft and holy,
In these days of melancholy,

Seem like distant dreams.

* * * * *

Hush'd is the brook's melodious prattling,—
But the winds and leaves are battling,
And the sleeted boughs are rattling
O'er the confined dead!

All the forest's dim recesses,
Which the sunshine seldom blesses,
Shorn of leaves and viny tresses,

Have no secrets now:

Quietly the ivy's creeping
Where* the blighted flowers are sleeping,
And the blast from northward sweeping,
Drives the sinless snow.

Round the hearth, when first assembled,
Tears upon our eyelids trembled,
Though the lips a smile dissembled,
As each strove in vain
To hide the drops of sorrow stealing,
Or the wo of buried feeling,
As the past, our loss revealing,
Stabbed the heart again!

* * * * *

Thus, when tempests rage around me,
Thus the darkness oft has found me,
And these thoughts have strongly bound me
With their wildest spell:
Then the WINTER seems less dreary,
And the fire-light shines more cheery,
For a VOICE, when I am weary,
Whispers—"It is well!"

*In the graveyard.

Ohio State Board of Agriculture.

The annual meeting of the delegates from the several County Societies was held at Columbus on the 3d of December.

Notwithstanding the unfortunate blunder in the published notices of this meeting, which designated the 10th as the time for convening, there was still a very good attendance of delegates from several parts of the State. I was unable to attend as had been expected, but gather a few items from the published account in the *Statesman*.

The report of the State Board was read, also a report on the soils of Ohio, by W. W. Mather; complimentary resolutions were passed very flattering to the officers of the Board.

At an election to fill the vacancies in the central body the following persons were chosen to serve two years:

- M. SULLIVANT, of Columbus.
- S. MEDARY, " "
- WM. CASE, of Cleveland.
- PHILO ADAMS.
- C. MUSGRAVE, of Crawford county.

Mr. Lawrence of Logan county, offered a resolution, on his favorite topic, the formation of an Agricultural Bureau for the State and for the General Government.

The State Board was recommended to ask the legislature for an experimental farm.

This looks like striving after agricultural education a subject needing attention, the claims of which were urged.

Jas. L. Cox, of Muskingum offered the following:

Resolved, That the State Board be requested to take into consideration, the expediency of instituting a State Horticultural Committee, to meet in the City of Columbus at stated periods, to examine fruits and vegetables of a perishable nature, with a view to make a report, and recommendation of premiums at the Annual Fair.

Several gentlemen spoke in favor of the resolution, and it was adopted.

METEOROLOGICAL TABLE.

CINCINNATI, OCTOBER, 1851.

THERMOMETER			WEATHER.			RAIN.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.	
1	48	74	fog, clear	clear	clear	
2	50	79	clear	var	do	
3	68	68	var	clear	do	
4	55	62	cloudy	do	do	
5	40	68	clear	do	do	
6	43	70	fog, clear	do	do	
7	46	80	clear	do	do	
8	51	76	var	var	do	
9	50	84	fair	fair	fair	
10	52	82	do	do	hazy	
11	57	76	var	var	cloudy	.20
12	58	65	cloudy	rainy	do	
13	46	61	var	var.	fair	
14	45	60	var	cloudy	var	
15	41	63	foggy	clear	clear	
16	36	65	clear	fair	do	.44
17	39	73	do	clear	do	
18	54	62	var	cl'y, rain	var	
19	50	60	do	var	fair	
20	46	68	clear	do	rainy	
21	46	57	cloudy	cloudy	cloudy	.68
22	34	51	clear	fair	clear	
23	28	52	do	clear	do	
24	29	61	do	hazy	cloudy	
25	42	52	cloudy	rainy	fair	
26	32	43	clear	clear	clear	.23
27	27	49	do	do	do	
28	48	68	var	do	var	
29	58	61	cloudy	rain	do	
30	59	60	do	clear	do	
31	44	65	fog, clear	do	clear	1.05

Total rain..... Inches, 2.60

Mean temperature of the month.....55.46°

Do do Oct. 1850.....54.65

Do do do 1849.....55.04

Do do do 1848.....56.04

Do do do 1847.....55.33

Do do do 1846.....54.81

Do do do 1845.....56.43

Clear and fair days in the month15

Variable, sun at times14

Cloudy, sun not visible.....2

31

Usual quantity of rain here in a year, Inches, 50

Rain in last 10 months,..... do. 26 09

Deficiency—with but two months to the end of the year,..... 23.91

I am indebted to my friend Dr. Ray, for most of the thermometrical record and phases of the weather of this month—having been absent.

JOHN LEA.

The Scientific American states on reliable authority, that if two feet above the throat of your chimney, you enlarge the opening to double the size for a space of two feet, then carry up the rest as at the first, your chimney will never smoke.



VOL. II.

JANUARY, 1852.

No. 4.

NEW YEAR'S CALLS.

In the world at large, that is in the fashionable world, a custom prevails among those members of social life who belong to the sterner sex, a pleasant custom it is too, that of visiting their female friends on New Year's day. This affords a very pleasant opportunity for squaring up accounts, settling little difficulties, and making the *amende honorable* for trifling peccadillos, neglects, omissions, etc., etc.; and we to that erring swain who should chance to neglect his duty in this particular to the favored sex, who have no concern but to stay at home and receive polite attentions.

Another class of citizens also claim a privilege of the same character, they are the great men of the land—the magnates in politics, in medicine, in law, and in religion—also assume to hold their *levees* on the same day. Now, as the Editor of this magazine can not conscientiously classify himself with either section alluded to, being neither a damsel nor a magnate, but merely a modest citizen, and as he has served long and faithfully as a carpet knight on many a New Year's day, when it has been both cold and *slippery*, he now proposes to spend this anniversary in calling upon a few of his Horticultural friends, hoping that his indications will be of use to

the readers of the Review, who may be thus induced to take a similar round during the month, for they will no doubt find the same attentive cicerones, and be shown the same beautiful plants and flowers, if they do but make the necessary visits; and who would not make a little effort, if he have at all the true love of flowers within him, when by so doing he may bring himself into immediate contact and instant connection with the delicious fragrance and beautiful coloring of the Tropics and summer, with which the hot houses are redolent, while all nature without is bound in icy fetters and the chill air is threatening to annihilate even the paralyzed vitality of vegetation.

To begin at the beginning, then, my first call this morning shall be at the Garden of Eden, where instead of Adam tilling the soil, D. McAvoy may be seen—if the call be made sufficiently early—with his aid, D. McGready, who is arranging a large grapery, for the cultivation of plants and forcing the luscious berry. This is a delightful soil, everything will grow well in it, the only difficulty at this elevation is the scarcity of water, which was severely felt during the past summer.

There is, however, a large amount of shrub-

bery on hand—grapes and strawberries are cultivated on the terraces that are formed upon the slopes, also fruit and ornamental trees in variety. But the best place to see McAvoy is at the Seed Store, on Fifth street, he is there in his element, among the seeds, bulbs, implements, and trees, but especially when the season arrives for handling grape-cuttings and grape roots or plants, and osage orange, of which he sells large quantities every spring.

Next, let us go to the hill tops on the Reading turnpike road, where we shall find in Vernon Village and Locust Grove quite a number of establishments in which the beauties of the garden and greenhouse are abundantly provided.

On the right, at the top of the hill, is the old establishment of Wm. Heaver, the houses of which he has greatly enlarged within a few years, and is still enlarging. His long stretch of glass, reaching more than 200 feet, with propagating houses and Camellia room in the rear, constitute quite a display of themselves. The main building, however, though filled with standard varieties of house plants, is also occupied by young grapes, and they are now so well established as to demand almost exclusive occupancy of the light and space, so that Mr. Heaver is obliged to provide further accommodation for his flowering plants, and arrangements are progressing for a new greenhouse, with a double span roof, which is a favorite style with him, and will enable him to make a fine display of his hyemal beauties another season.

But let us see what he has at present.—Entering by the office at the west end, one door leads into the Camellia house, in which is a large plant of the white Azalea, that has been forced into an early bloom for the holidays for which occasion the pure white flowers are very acceptable, but not bearing a comparison with the matchless purity of the

old Double White Camellia, nor the exquisitely formed Lady Hume, and Towne's Blush. For those who admire the more gaudy colors, here are also the different shades of red, distinct and blended, in different styles.

Another door from the office leads into the main house with its southern aspect; it is divided by glass partitions into several compartments—the first is a sort of conservatory, in which the plants occupy a rich border on either hand, and furnish a fine display of *Euphorbia Jacquinæflora* with its brilliant flowers, Roses, Heliotropes, Lantanas, Abutilons, etc. Further along in the greenhouse proper, are many pot plants, some of which are beautiful winter bloomers. The *Habrothamnus elegans* and *Cœstrum aurantiacum* are now particularly attractive. But the *Daphne rubra*, with red buds, is beautiful and exquisitely sweet also—why is it not more cultivated here? Further along you will find different classes of plants, Azaleas, Heaths, Roses, classified according to their several wants and temperaments.

In the rear of this structure is a house built more for use than for display; it is low, so as to bring the influence of the glass directly upon the plants that are grown in a rich border, and appear to like their union of stove heat and sunshine amazingly, as they are in constant bloom. Roses are the chief product, they are ever lovely. A Lantana is also very brilliant in its display of orange colored blossoms.

Outside, an abundance of evergreen and deciduous as well as fruit trees of various kinds await the spring sales, which are much facilitated by having a city establishment, on Walnut street, above Fourth, where he also receives calls and orders any day.

Lest you should weary, even with the beautiful things here, let us cross the road and call upon John Sayers, at his "Cottage Garden," where we shall find several houses and

rows of pits, each adapted to different classes of plants. The first is a cold house, devoted to Azaleas, Verbenas, Roses, etc., and it is not as interesting as it will be some weeks hence, but even here may be seen the last of the Chrysanthemums, among which is that beautiful liliputian, called *metrocarioides*.—The large old plants of the Lamarque, Solfa-terre, and Laura Davoust roses, growing in one corner and trained overhead, will furnish a beautiful display in their season. Very little heat is employed here, so as not to bring on the plants too soon. A pair of wrens have domiciled themselves for the winter, and occupy their leisure in picking off any insects that might prove injurious to vegetation.

The next house is devoted in part to Camellias, some of which are very fine, as Mr. S. has taken care to select only the best varieties, among which the old white, already mentioned, is justly esteemed a prime favorite. The rest of this building is occupied as a border with very fine plants, always full of flowers in the winter. The Melville, Saffrano, and Malmaison roses, do remarkably well under this treatment. The Begonias, in pots, succeed well and are displayed in great variety and beauty, especially the *B. fuchsioides*, with its brilliant flowers. The Cacti of the *truncata* family are blooming beautifully, and their violaceous and scarlet flowers are much admired.

Adjoining this is the Pelargonium house, which even now presents an array of fine plants, that are but the beginning of what they are to be next May, when they will furnish a beautiful display, as this collection embraces the finest varieties that are cultivated in our country. Other plants of various kinds occupy portions of this house.

Should you be visiting this establishment a little later, allow me to direct your attention to a new rose house, put up on the cheap

plan, as it is a department which possesses great interest for me, though now in its winter dress. Here may be found a varied and abundant supply of that queen of flowers, and the blossoming in March promises to be very attractive. The Remontants and Bourbons especially, and among those which are much prized of other families, the Mosses and Persian Yellow, must not be overlooked.

This house is 105 feet long by 9 feet wide, and has peculiarities that are worthy of notice, did space and time permit, but neither is offered by a note book and a New Year's call. The cost was two dollars and a half per running foot, including the round flue of earthen pottery, ten inches in diameter, which has been found to answer very well so far, notwithstanding the severity of the weather.

Whole ranges of pits appear to be full of plants, but they conceal their treasures at this season of the year to surprise us with their opening beauties next spring. It is truly astonishing what an amount of produce may be furnished by a small piece of ground, evergreens, shrubbery, herbaceous plants, ornamental and fruit trees in great variety, and abundance present their claims to attention on every hand within this little garden.

Hurrying along, we soon leave Vernon in the back ground, and approach Locust Grove, where Anthony Pfeiffer has located himself on account of the adaptiveness of the soil to his favorite family, the Rose. He has here a large house adjoining his dwelling, in which are some fine plants—among them the Camellias and Azaleas, will first claim the attention—the Cinerarias will follow, and his beautiful Stock-Gilliflowers, will fill the house with delicious perfume in their season.

A beautiful double-span greenhouse has just been put up, which promises to be very attractive towards spring, as it is filled with handsome large young plants, of the most approved varieties, especially of Remontants

and Bourbons. Mr. Pfeiffer is decidedly an admirer of this family of plants, and though one of the very best vegetable gardeners in the country, he is turning his attention more exclusively to flowers. I shall miss his exquisite salads and cauliflowers, but that must be overlooked, as there is a degree of gallantry in the matter which indicates not only a devotion to the Queen of Flowers, but a consideration for the comfort of his wife, who will be thus relieved from much of the trouble of marketing.

Our readers are indebted to Mr. Pfeiffer for his practical directions for the preparation of hot beds, which appeared last spring, and to which little need be added by way of explanation; tact alone is wanted to enable any person to succeed if they be faithfully followed.

Pfeiffer's Bulbs and Pinks have made him somewhat notorious—the former, especially the Hyacinths, have improved in their characters since they were imported, and he always has a number forced for early bloom, when they are eagerly sought after for a fragrant and beautiful window ornament.

The next call must be on Thomas Kuott, who occupies a lot to the westward, and who was the pioneer in this new flower region, which he soon discovered to be admirably adapted to the growth of roses. His plants make a splendid promise for the spring markets where, indeed, they are already well known to our citizens: his contribution to the Holiday decorations consisted of more than fifty bouquets.

He, too, has been extending his glass considerably, but has filled the staging handsomely, and has whole generations of young plants coming on for future use, and to supply the place of the hundreds which will take their departure with the opening of the spring and of their lovely buds.

Immediately north of this place, on Archi-

bald street, let me call upon a couple of intelligent Germans, who have recently established themselves among us. Beck & Tœpfer have been somewhat known as having introduced several roses last year, and a fine assortment of evergreens, many of which are rare with us. *Pinus excelsa*, *patula*, *ayacahuite*, *maritima*, *religiosa*; *Cunninghamia lanceolata*; *Abies Menziesii*, *pinsapo*, *Picea Webbiana*, *Nordmannia*, etc.; *Juniperus africana*, *daurica*, *intermedia*, *pendula vera*; *Cupressus torulosus*; *Thuja filiformis*; *Taxus tardiva*, *baccata aurea*, etc.; *Ilex latifolia*, *calamistrata*, *angustifolia*, *caroliniana*, *aquifolia aurea* and *ferox aurea*; *Mahonia tenuifolia*, *Daphne Aucklandii*, *Cedrus deodara*, *Phyllocladus trichomanoides*, *Podocarpus spicatus*, *Genista Bonleyana*, *Quercus ilex*, *Cotoneaster microphylla*, and others.

Returning to the base of the hills, or crossing by the zigzag road over to Walnut Hills, let us make a call upon Jas. Howarth, in his new establishment; he is one of the oldest gardeners in this part of the country, and has seen more advance in the business than any other. A few years since, my new year's calls would have been restricted almost exclusively to him and Martin Schnetz, both in the city. Now, however, James is a new beginner in his present location, which is a very prominent one, with good soil, and promises to be well adapted to the business when once established.

Turning the corner, a short ride along the Madison road brings us to the large garden of Jos. S. Cook, which is also comparatively new, though he has two large houses of substantial character, well filled with a general assortment of greenhouse plants, from which he is prepared to present the visitor with a beautiful bouquet at any time. This proprietor has become a gardener from the love of the thing; he will benefit the public and succeed in gratifying his tastes. He feels quite

proud of his Camellias, Prattii, Fimbriata, Old White, Donkaleari, etc.

His grounds are occupied by the usual assortment of trees, shrubs and evergreens, which are cultivated for sale.

A ride of half a mile further brings us to the garden and greenhouse of Jno. McFadden, at the pretty little fancy cottage of S. W. Pomeroy, which is a curiosity in itself, a little gem architectural that I should be happy to present to the reader, but as it is unoccupied in the winter, shall not now call upon the owner, but turn to the flowers. His first greenhouse was erected in part by Chas. W. Elliott, once a promising gentleman gardener, architectural writer and horticultural editor here, but now retired to pursue his literary labors amid the genial influences of New Haven, whence it is hoped his rays of light will reach even us ere long.

Jno. McFadden has been quite successful in rearing many beautiful flowers, and has made a handsome display with his slender material at commencing, now, however, grown to a considerable stock and full of promise.

A half an hour's ride now brings us to the vicinity of Sharpsburgh, where the extensive grounds of I. C. Ferris & Co. are situated. A large portion of the soil has been trenched for the reception of the nursery stock they have planted out, and are about planting in great numbers—intending to have the largest collection in the West, as they say.

Their large greenhouse, which contained a general assortment of plants, is now a sad mass of ruins, having been destroyed by fire during the excessively cold weather of December. Arrangements are already making to rebuild upon a more secure plan; but they expect to turn their attention less to fancy plants, and more exclusively to the general nursery and seed business, in connection with their Horticultural Store, on Fifth street, in the city. Roses are to form a feature in

their nursery, among the fruits and ornamental shrubs and trees. Phœnix-like, may they soon rise from the ashes as they raise their new rose-house, with additional security of brick walls and well placed flues!

Private gardens, beautiful as they may be, can not claim attentions to-day—another time will answer for them—not even the brilliant display of Wm. Resor's beautiful greenhouse, which Evans has again kept filled with lovely flowers all winter, can turn me from the line of *professional* visits, while jogging along to the Clifton Nurseries, where all is now chill and frozen, but not drear, for the abundance of varied evergreens communicate an almost resinous atmosphere from the extensive and compact squares they occupy, while they shelter the other sections of the garden closely planted with fruit trees, ornamental shrubbery, and a profusion of roses, under the skillful management of M. Kelly.

It is astonishing what a change has come over this spot within two or three years! fine forest trees on one hand and an orchard on the other, have yielded to the ax and the mattock, while the delving spades, in the hands of Hibernia's sons, have thoroughly trenched the whole soil, and the mellow loam has been enriched with copious applications of manure, so that it is amply prepared to support the large stock of trees that are thriving upon it.

After passing many fields of rich land, thoroughly cultivated in culinary vegetables, my call is made upon the Patriarchal owner of Spring Garden, where a warm welcome is ever found—extended not only to those claiming personal friendship, but also with equal liberality and kindness to those most oppressed and in greatest need of sympathy. Indeed, the warm exposure resting against the high hill behind it, the large evergreens and numerous hedges of cedar, can not fail to

give the place an air of cheering warmth—a welcome within itself.

This garden has long been known as a nursery of fine fruits as well as of young trees, for the proprietor has been actively engaged in the collection of what were called choice varieties, from every section of the country, and he has been desirous of fruiting every kind, so as to test them himself—by this means he has learned that it will not do to take the recommendations of every farmer as to his *favorite* apple, without making considerable allowance, until we shall have tested them for ourselves. For his efforts in pomology, Mr. Ernst deserves the thanks of all.

And now, by way of finishing the day's ramble, I will call upon our excellent friend, S. S. Jackson, at the "River Road Nursery," where an hour may be spent very pleasantly at any season of the year, but more especially when the whole garden is clothed with its vernal or æstival drapery; now all is bare and frigid, save the abundant evergreens, many of which are judiciously planted to the northward of the greenhouses, and furnish a good shelter from the cold blasts that pour down from the hills, and against which the fine specimens of pines, cedars, and junipers form a capital screen.

Within the greenhouses all is neat, quiet and cheery; the office has a comfortable stove, desks, and seats, the happy faces of the boys who are taking their day's lessons, after a practical exercise of the gardener's art, show that all is well regulated here.

Turning to the left we enter a wing appropriated to plants that require a warm situation—among them are many which are new with us—the *Lycopodium arboreum* and *Wildenowii*, the *Hoya imperialis* and *Bidwellia*, the *Aeschynanthus speciosus*, the *Boronia viminea*, with its delicate and fragrant foliage, just showing its buds, the *Lasiandra splendens* and *Gesneria zebrina* in the same condi-

tion; *Stephanotus floribunda* and *Thibaudia vacciniifolia* are also observed.

Euphorbia Jacquinaeflora is showing the buds of its scarlet wreath of flowers; *E. Poinsettia* is already beautifully splendid with its bract-like leaves; a fine young plant of the *Croton picta*, belonging to the same order, is also characterized by its parti-colored leaves, which are very peculiar.—Quite a curiosity in its way, is a seed-box filled with young plants of the *Nepenthes distillatoria*, every leaf of which, small as are the specimens, is terminated with its peculiar appendage like a little pitcher, with its lid half open for the reception of the gentle dew, while near by are fine plants of *Sarracenia*, with their hollow leaves standing full of water. Here also is the *Vanilla* bean, showing its climbing and air-plant habit by sending down from every joint a curious fleshy support root.

Among the plants that most abound in floral beauty at this time, there are fine specimens of *Salvia splendens* and *leucantha* in full bloom; the delicate bright and profusely flowering *Leschenaultia formosa*, Double White *Primula*, *Begonia parviflora*, *carnea* and *fuchsioides*, the latter, trimmed up as a standard, will be very pretty when in full bloom—these, together with the bright-flowered *Nasturtium Lobbianum*, the *Habrothamnus elegans*, Tree Violets, *Chorozema varium*, *Abutilons*, *Acacias*, *Rochea falcata*, *Camellias*, and many others, make up quite a floral display and a botanical variety for study at any time.

Mr. Jackson's excellent foreman, H. H. Williams, a man who loves to read and learn what others are doing, has been trying his hand at growing plants in peculiar forms, even the *Verbena*, with its sprawling habit, is made to assume regular shapes at will; some are trained in pyramidal forms, others as spreading trees, and others as weeping or

drooping plants—in all these a single stem tied to a stake supports the head.

In the propagating house Mr. Jackson has a large collection of the new Chrysanthemums, many of which are of the Liliputian character, and we may anticipate a treat among them next autumn. That seedling Azalea, which has excited so much remark on account of its apparently perpetual character, is still in bloom, and looks as though it meant to have its flowers inspected at all times. The stock of the Azaleas is kept in a cold frame, covered from the frost, merely with straw; this is giving them plain fare, but they will probably bear it well, and come out next spring, fresh from their long rest.

Turning to the west from the central division of the greenhouse, we enter the apartment assigned to Pelargoniums and Roses, which are kept quite cool, so as not to force them forward too early; the plants, however, look very well and healthy, they are resting now to make a vigorous push in the spring—

both families contain all the choicest varieties.

Every day must have an end, even New Year's, pleasant though it be, is not exempt from the fate of its sisters of the flowing year, and the slanting rays of the sun advise a recourse to the pleasures and duties of home; but so delightful are these visits to the gardens and greenhouses, that I must again urge upon all to embrace the opportunities that may offer to reap a similar harvest of agreeable relaxation: they will thus not only enjoy the present, but have recollections worthy of preservation, and when the spring comes, with its epidemic mania for gardening, which it is hoped may spread among the people, you will know where to look for the plants that are to be the ornaments of your windows and parterres.

To gardeners, amateurs, and lovers of the beautiful, to one and all, let me wish you many happy returns of the NEW YEAR!

WINTER COMING.

BY THOS. HOOD.

Summer's gone and over!
Fogs are falling down;
And with russet tinges,
Autumn's doing brown.

Boughs are daily rifled
By the gusty thieves,
And the Book of Nature
Getteth short of leaves.

Round the tops of houses,
Swallows as they sit,
Give, like yearly tenants,
Notices to quit.

Skies of fickle temper,
Weep by turns and laugh—
Night and Day together,
Taking half and half.

So September endeth—
Cold and most perverse—
But the months that follow,
Sure will pinch us worse!

SNOW.

BY WILLIAM B. GLAZIER

Fall thickly on the rose-bush,
Oh! faintly-falling snow!
For she is gone who trained its branch,
And wooed its bud to blow.

Cover the well-known pathway,
Oh, damp, December snow!
Her steps no longer linger there,
When the stars begin to glow.

Melt in the rapid river,
Oh, cold and cheerless snow!
She sees no more its sudden wave,
Nor hears its foaming flow.

Chill every song-bird's music,
Oh, silent, sullen snow!
I can not hear her loving voice,
That lulled me long ago.

Sleep on Earth's broad bosom,
Oh, weary, winter snow!
Its fragrant flowers, and blithsome birds
Should with its loved one go!

DR. LEE ON THE EXHAUSTION OF SOILS.

In our humble judgment, the causes of the potato rot are as numerous as those that induce disease and death in animals. Life and death, whether in a plant or animal, are phenomena of the causes of which, we know nothing. Why they die so soon, or live so long, or live or die at all, is a secret not likely to be revealed by science. Nevertheless, we know that some substances operate as poisons, others as aliments, and that all living beings may be starved to death, from the lack of suitable food. We know, also, that some diseases are constitutional, and extend from parent to offspring, and that others are temporary, and affect the individual alone.

We do not suppose it possible always to prevent the premature extinction of vitality in potatoes, and their speedy dissolution thereafter, any more than it is possible to avoid all untimely frosts, the attacks of rust and mildew, or the death of children. Nor can we appreciate any peculiar mystery in this fact, as nature operates by general not partial laws. If medical science shall ever approximate perfection, it will be by preventing, not curing maladies. To prevent the potato disease, all the conditions necessary to the healthy growth of the stems, leaves, roots, and tubers of the plant must be complied with, from generation to generation. We know a lad, not twelve years of age, and perfectly temperate, who suffers much from the gout, a disease of which his father and grandfather died. Many noble families have become extinct from the misconduct of progenitors; and the same law extends not only through all inferior animals, but to the lowest plants endowed with life. That is, if the living principle is maltreated, the organized matter which it pervades, returns more speedily to its original elements. To apply a good deal of putrescent manure to feeble potato plants, is like treating indigestion with a double meal of pickled clams.

In the way of postscript, "S. W." gives the following information: "Since writing the foregoing, I have seen Joseph Wright. He said that about one-third of his crop rotted, and that the other two-thirds averaged considerably more than two hundred

bushels per acre, of large, sound potatoes. Twenty-five two-horse loads of soap-boiler's ashes were applied to the acre, with as many loads, of well-rotted stable manure. He is decidedly of the opinion that the ashes alone saved the crop, as where most ashes were found in the hill, the potatoes were the largest and best.

Those who have read this journal during the last six years, need not be told how "decidedly" the opinion of Mr. Wright, founded on experience and observation, coincides with our own. In 1845, when the potato malady was first seriously felt in New York, it so happened that the writer spent the summer months in giving public lectures in different counties, and naturally took pains to learn the circumstances most favorable [obnoxious] to the rot, and those where the disease did not appear. In most cases, the lack of alkalies in the soil was connected with the premature decay of the tubers; in some instances, however, we found insects preying injuriously on the stems of plants. Had Mr. Wright applied twenty-five bushels of unleached ashes, instead of as many loads of stable manure to the acre, in addition to those from the soap factory, it is more than probable that his would all, or nearly all, have been sound. A farmer should be content with three hundred bushels of sound potatoes per acre, and such crops were grown in 1850 by the aid of forest leaves and lime. The latter was spread broadcast and harrowed in at the rate of sixty bushels per acre, whilst moist leaves and a very little earth covered the seed planted in drills or rows, one way only. When forest leaves decay and yield their organic and inorganic constituents, 100 lbs. furnish about six times more alkaline salts, than a like weight of rotting wood. Hence, if a farmer has his choice to apply a ton of rotten wood, dry weight, or a ton of leaves, equally dry, as a fertilizer, the latter would be six times more than the former. To feed potato plants with the highest success, one needs to understand the composition of every substance grown on the farm, whether in the woods, in pastures, meadows, or plowed ground. Fortunately, the laws of God are unchangeable,

and have never to be learned but once, although they should be obeyed always. Instead of carefully studying the laws which govern the healthy organization of plants, and the improvement of domestic animals, there are at this time not less than four millions of farm operatives at work in the United States, in violation of one of the plainest duties that Providence imposes on man, who is the only animal that impoverishes the earth. Not one agriculturist in a thousand has a clear idea of the elements of grain, provisions, and wool, cotton, tobacco, hay, and other crops, which exist in an available form within two feet of the surface of the earth; nor of the quantity of these elements of food and clothing annually removed from American soil, over and above what domestic animals take out of fields in their stomachs, and what are carried off in crops.

We affirm, without the fear of successful contradiction, that subtract the total consumption of the people of the United States in the year 1851, from their total production in said year, and the surplus will not pay sixty cents a day for the labor necessary to replace in the earth as much potash, soda, magnesia, lime, sulphur, phosphorus, ammonia, and chlorine, as the sixty millions of acres most exhausted will part with in a twelvemonth. It is a great and sad mistake to regard our planting and tillage labor as productive industry; it is emphatically the most destructive that can well be imagined. We have been two centuries exporting potash and pearlash, and wasting the same in soap-suds and manure at home, every pound of which came from the soil that now needs alkalies above all things. More than a moiety of all the incombustible matter in a mature potato plant is potash; and at least, a third of the ash in every seed of wheat grown in the Union, is the same alkali.

Pigeons scratch in the surface of the earth, fill their crops and fly away; squirrels have holes and work industriously at their autumn harvest, to garner up a fair stock of nuts for future consumption; and man, too, waxes fat by simply extracting the elements of bread and meat from a virgin soil, which he never placed there and intends never to return. He assumes that God created fertility for the present gener-

ation only, and that the one hundred millions of souls who will be in this Republic fifty years hence, and before our children shall be off the stage, can have no possible rights or interests in the continued fruitfulness of the earth. A tree is known by its fruit, and men must be judged by their uniform conduct. The policy which we condemn with so much earnestness has diminished the population of Ireland nearly two millions in the last decade; and it was the leading, all-controlling cause of the downfall of Babylon, Palmyra, Tyre, Carthage, and Rome itself. Who does not know that there are many millions of acres in this young agricultural nation which have been bled, and skinned, and finally abandoned, because they have been insanely robbed of their alkalies, their phosphorus, and available sulphur? The most pains-taking researches and estimates show, that at least twenty thousand dollars' worth of the elements of fertility are daily washed into the river Thames from London, while laboring people are daily fleeing from the United Kingdom by hundreds of thousands, annually, to escape hunger and starvation. Belgium is the most densely peopled and the happiest nation in Europe, and simply because her farmers have the common sense to make the excreta from each inhabitant worth to the land an average of five dollars a year. At this rate, the nightsoil annually wasted in the State of New York is worth the trifle of fifteen millions; and the soil from which all this fertilizing matter is drawn can not but be growing poor and poorer as time advances. Suppose all the potash annually wasted in the State of Ohio and exported therefrom was all put in one heap, and all that is imported placed in another, how would the two compare in size and weight? In each cubic foot or 100 lbs. of her soil, there may be an ounce of potash available for the organization of starch in potatoes, wheat, and other crops. Thirty years hence, when this fertilizer and all others are mainly consumed, from what source will the farmers of the Buckeye State obtain three or four thousand tons of potash needed to make the crops of a single season? Can they go to the city of Cincinnati and gather up the alkalies that have been washed into the Ohio river in the preceding half century? Will Lake

Erie give up the raw material of human food that Detroit, Toledo, Cleveland, Erie, and Buffalo have poured into it? The people of China save the potash in the soap with which a man is shaved, and the ammonia (another alkali) in his beard also. Potash is worth, even in this country, six dollars per 100 lbs. for agricultural purposes, and ammonia is worth double that sum. When shall we begin to study rural affairs as a useful science, establish agricultural schools, and think as much of knowledge as we do of new carriages, carpets, or pianos? Five millions of farmers and not an agricultural college in the thirty-one States! Fifty millions annually expended by Congress, and not the first dollar appropriated to promote agricultural science. We begged, prayed for the pittance of \$200 to try experiments in the culture of potatoes, corn and wheat, and the preparation of nightsoil, for the common benefit of all that till the earth, but not a dollar could be had. While Congress publishes 130,000 volumes a year of agricultural reports prepared by the writer, it insists on keeping the light of science out of these books. We are compelled to look to England, France and Germany for knowledge that ought to be fostered and developed under our own free institutions; but so long as American farmers send selfish politicians, instead of statesmen to their national legislature, there can be no change for the better. The writer has thrown away ten years of hard labor, and accomplished next to nothing, from the lack of \$10,000, which the Legislature of his native State might have granted without the least inconvenience. To increase knowledge as well as to

diffuse it, is an object worthy of any man's ambition. But there is not one experimental farm in all the new world to bring to light the laws which govern the healthy organization of potatoes, or any other crop grown in America. What agricultural society has given the first dollar to aid any gentleman in his critical study of soils? His time, his apparatus, and his chemicals, all cost money; but he is expected to work for nothing and find himself. Public opinion, the seeds of which are now being scattered broadcast over the land, will order things differently in the next generation. In our time, the great work of impoverishing the soil will never be less than it is in the year of Grace 1851.—*Gen. Farmer.*

Potato Rot.

MR. EDITOR.—There may be some of your readers who are so unfortunate as to have their potato crop affected with rot in the cellar which was my misfortune in 1850, in one portion of the crop to a great extent. When discovered, we at once turned them over, removing all that were affected; but that did not arrest its progress. We again turned them and took at the rate of one bushel air slacked lime and two bushels charcoal dust to the hundred bushels of potatoes, and liberally sprinkled them when turning. Its effects were magical; the whole atmosphere of the cellar was purified, the disease arrested and even the partially decayed parts dried up. We feel assured that any one who tries it will arrive at the same happy result.

R. BUIST.

Horticulturist.

ORNAMENTAL CANE-BRAKES—SEEDING OF THE BAMBOO CANE.

On one side of my garden is a small cane-brake, about fifty by one hundred feet in diameter, which has grown from a few roots, planted there by Gen. M. D. HARDIN, assisted by his son, (the gallant Col. JOHN HARDIN, who fell at Buena Vista,) when he was a small boy, as he informed me; consequently the brake is now about forty-five years old. During this period, the growths of each suc-

cessive year have sprung up larger and taller than those of the preceding, until they have attained the height of twelve or fifteen feet.

Previous to this year, there is no account of its having borne seed, except a single head, which was found last season. But about the first of May of this year, without any obvious assignable cause, the whole

cane-brake appeared to be going to seed.—From the bushy ends of every stalk, without regard to age or size, the heads were springing in the greatest profusion. The only flower visible was a small oblong light-yellow pendant, attached by its middle, by a very delicate thread, to the husk containing the grain, and from this pendant the pollen was emitted. The heads were long and branching; more resembling the oat than any other grain. The seeds were placed on alternate sides of the stem, in single rows, were without awns, and when divested of the husk, were round, oblong, and pointed at the ends, larger than grains of rye; the farina is pleasant to the taste, exceedingly white, and resembling wheat so much as to attract the white weevil. The stem of the heads is exceedingly brittle, when ripe.

In consequence of the exhaustion of the plants, caused by bearing seed so abundantly, the usual number of vigorous young canes have not sprung up this year; but instead of them a great number of small and dwarfish shoots, which, as late as November, continued to exhaust themselves in fruitless efforts to bloom and ripen seed.

The canes, with a few exceptions, have died, as have also the long horizontal roots from the joints of which the canes spring up; and the rich, cheerful green color of the brake has been changed to the most desolate yellowish-brown.

The seeding of the brake is, in some respects, singular. This is the first time in forty-five years, and it is probable that this is the only time, that the canes from these roots ever bore seed, as it appears to be the habit of the plant to die as soon as it bears seed. No one, of the many old settlers of Kentucky, with whom I have conversed, ever knew the natural brakes to bear seed extensively; but I have been informed that

it was the impression of the earliest emigrants to Kentucky, that the cane then in the country had sprung up from the seed, simultaneously, a few years previous to their coming.

A little brake within two miles of mine went to seed last year, and this year is entirely dead; another brake nearer to mine, in the opposite direction, is green and flourishing, without any indication of going to seed; while two other brakes, which were transplanted from mine, have this year seeded and died, simultaneously with mine.

It can not be said that this brake never seeded before for the want of fructification, for it never bloomed before; and the pollen, or male property of the plant, is produced simultaneously with the female property. If the cane plants of Kentucky are all of the same age, it can not be said that this brake did not seed earlier for the want of proper maturity, inasmuch as different brakes appear to bear seed in different years.

If it is true, as Botanists inform us, that the natural home of this *genus Arundo* is within the tropics, we can not expect a full display of the proper habits of the plant, in this, its adopted home; and I have not been able to learn whether it bears annually within the tropics or not; but I suppose that even there, it seeds only at long intervals.

There has been a general regret among the members of my family, at the loss of the brake. It was in constant requisition for riding-switches, walking-canes, fly-brushes, yard-brooms, weaving-quills, flower-stakes, pea-sticks, etc.; and it was also highly ornamental—the bright green mass, presenting a most delightful object to the eye, both in winter and in summer.

It afforded for poultry a secure and pleasant shelter at all seasons of the year,

and was an object of great attraction to the birds ; and during the spring and summer the air was loaded with the sweetest songs of a thousand warblers, which roosted and nestled in its secure retreats. During the spring and fall, numerous flocks of migratory birds, attracted from their lofty flight, would come down every night, and having reposed securely in its bosom, and rested their weary wings, would resume their tedious journey early in the morning.

As another cane brake was, on all accounts, indispensable, a quantity of seed was secured, and the ground was prepared for another ; but I hope we shall be spared the trouble of planting them, as ten thou-

sand young plants have sprung up in the former brake, from the fallen seed ; which I am in hopes will come rapidly forward, with proper care ; and that in a few years the birds may rest as securely and sing as sweetly as in former times.

I send you, Mr. Editor, herewith, a few heads of the cane seed, to gratify any curiosity on the subject, and so that your engraver may, if desirable, illustrate them to your readers.

Will any of your numerous intelligent correspondents favor us with additional facts and information on this subject ?

ROBERT M. SCOTT.

Locust Hill, Franklin co., Ky., Nov., 1851.

CULTIVATE FRUIT.

WE are surprised at the apathy of our citizens to the cultivation of fruit. Nineteenths of the intelligent, industrious, painstaking, and economical people, who will busy themselves twelve or fifteen hours a day in their ordinary pursuits, will entirely neglect providing themselves and their families with this luxury, though they may have ample grounds for the purpose, every way fitted for producing it in profusion.

We call it a luxury, but it is more properly one of the necessities of life, and, for the want of it, persons frequently become diseased, or continue so, if disease is induced from other causes, when the free use of seasonable, well-ripened fruit would have restored them at one-fiftieth part of the expense incurred by apothecaries' and doctors' bills. Who ever heard of an ailing family, whether adults or children, who indulged freely in wholesome fruits, and abstained from the made-up dishes of the cooks ?

But it is not as a corrective or medicine only, that we deem fruit invaluable as an article of diet. It has a direct money value, estimable in dollars and cents, for the amount it contributes as food to the support of the human system. This is conclusively proved, both theoretically and practically, for accurate analysis has shown that cultivated fruits contain large proportions of nutritive matter,

and experience equally proves that, when fruit enters largely into the diet of the family, a corresponding diminution of other food is always apparent. As profit, then, is directly concerned in the cultivation of good fruit, we hope we may command the favorable attention of our readers for a moment while advocating its increased cultivation.

Many residences in the city, and nearly all in the country, have yards or grounds sufficiently extensive to admit of the cultivation of some choice fruit trees ; and, where they are too limited for these, a few well-selected grape vines can seldom want suitable earth for rooting or a favorable wall for climbing with its prolific branches. The yards even of the densely built city of New York, if well planted and cultivated with vines, would yield no inconsiderable proportion of the grapes required by its citizens. Yet how few tables in this city and even in the country are supplied with this delicious fruit from their ample surroundings.

We know a half acre of cultivated raspberries (the genuine red Antwerp) that produced in a single season what sold for \$1,400 in the New York market. Yet how seldom do people have a plate of this fine fruit of their own raising to treat a friend with.

The strawberry is one of the most wholesome as it is one of the most delicious of

fruits, and a patch four rods square, if judiciously selected and nicely cultivated, would yield an abundance for a large family, yet, not one household out of every hundred in the Union is supplied with any except such as they buy or gather from the untilled meadows.

The cherry is a hardy tree, a prolific bearer, and a most delicious fruit, if the finer varieties be selected, and the tree is decidedly ornamental, yet numberless families get no cherries worth eating, save what they beg or buy at extravagant prices.

The pear, the peach, and the plum are abundant bearers, and the richness of flavor of their best varieties are not surpassed by any that grow either within or without the tropics. They have of late been subject to their respective scourging diseases of blight, the yellows, and the curculio; but a moderate share of attention to their proper treatment and remedies will remove each and afford an ample return to such as will give a small part of their time to cultivate them.

If objection be still made to the nice and discriminating attention required by the foregoing fruits, what possible excuse can our indolents frame for the neglect of that hardy, self-sustaining, universally acceptable fruit, the apple? This, the king in American fruits, will grow everywhere, produce abundantly, and of the choicest flavor, provided only, that a suitable position, fertile soil, and the best varieties, and adapted to the locality, be adopted. If objections, thick as blackberries, can be alleged against the cultivation of any or each of the other fruits, none can be successfully maintained against this. It is a fruit that is suited to all tastes, as it runs through any conceivable shade of flavor; it is in full season from July to June, and is equally adapted for use when plucked from the tree, as when prepared by an almost infinite variety of forms, when artificially compounded by skillful cookery. We marvel at the neglect so frequently observable in the cultivation of this splendid fruit.

A reasonable degree of attention to these products would not only be attended with decided pleasure in the planting and rearing of the trees, and in the luxury and support they yield to the family as food, but there would be frequently, besides, an ample result in money profit from the sale of fruit. A friend whom we visited the past season had but

two or three acres around his house, and this mostly devoted to lawn, gardens, out buildings, and ornamental trees; yet he informed us that a fruiterer solicited the privilege of gathering some of his surplus cherries for market, and paid him \$75 for what he scarcely missed. He had an abundance of choice peaches, and we have not, for years before, seen such a profusion of the daintiest plums and pears, including barrels of the fairest Seckels we ever saw, the White Doyenné, Bartlett, &c.

The progress of the age, we are happy to observe, is decidedly toward fruit-raising. Reading, observation, and the impulse given by the various agricultural and horticultural societies of the country, have stimulated effort and sharpened invention, and thousands of our more intelligent countrymen are commencing a system now which posterity will carry forward to a successful issue. It will be a disgrace to them if the finest fruit-producing country of the globe does not hereafter yield an abundance of fruit to supply every mouth in the Union.

American Agriculturist.

My valued friend, H. P. Byram, who conducts the agricultural department of the Louisville Journal, has thus directed attention to an excellent article upon the subject of fruit culture:

"Many farmers have been deterred from planting orchards from the apprehension that the market will be overstocked with fruit. The opening of the numerous railroads through every portion of the country in connection with steam navigation will create an unlimited demand for fruits for years to come. Instead of a supply, the price is steadily and annually increasing. A dealer in Western New York from one county has shipped the present fall to New York city and to Ohio and Kentucky 20,000 barrels of apples.

"We believe that no investment on a farm yields a profit to be compared with that of an orchard of judiciously selected fruit trees. We call the attention of owners of land to

the following article on the subject from the New England Farmer: "

Of all fruits produced in New England, the apple is the most easily raised, the cheapest, the most durable, is capable of being used in more ways as an article of food, and is, perhaps, the most wholesome and nutritious. There is no family where they are not used to a greater or less extent, and very few families where three or four times the present quantity would not be consumed, if they could be purchased throughout their season for about fifty cents a bushel.

Sweet apples, where they can readily be obtained and at low prices, have become as common an article of food upon the table as the potato, and, since the high prices of potatoes have prevailed, have been more extensively used in some districts than the potato itself. In one of the small towns of this State, but one which produces much more than the average quantity of fruit, a gentleman states that the amount of apples produced is about ten thousand barrels, and that this product is not more than the inhabitants of the town would conveniently use themselves. The farmer, however, must turn some of his produce into cash, and finding the apple in demand, sells a large proportion of what might profitably be consumed in his own family at home.

The average quantity of apples consumed by each family would be at least five barrels, some families consuming three or four times that number, and others less. This would run the number of barrels required for home consumption in the single State of Massachusetts up to nine hundred and ninety-five thousand barrels. Now, we have no means of ascertaining, with anything like accuracy, how many apples are annually produced in this State, but have no idea that it is anything like that amount. If each town in the State should produce three thousand barrels, it would still fall short of the amount required to meet the demand for home consumption. If these suppositions are correct, no fears need be entertained that the supply of apples for many years to come will be greater than the demand for them.

Allowing one barrel of cider to each family in the State for the various purposes in which it is used, for cooking, vinegar, etc., and it would give 199,000 barrels—which at

eight bushels to the barrel, would make one million five hundred and ninety-two thousand bushels, or one hundred and ninety-nine thousand barrels, making the amount demanded in this State alone, for home consumption, at the very lowest estimate, one million one hundred and ninety-four thousand barrels of apples a year!

So far we have only spoken of what may be used at home—the demand for exportation may, and unquestionably will be, much greater. Baldwin apples are selling in San Francisco for twenty-five cents each, and at thirty-five dollars per barrel. The orchards of New England will soon be required to meet the demands of this widely-extended and rapidly-peopled country; and then the friendly relations and frequent communications between this country and Mexico will naturally open a market for our apples there, in exchange for her oranges and other commodities. Indeed, the whole continent, down as far as people congregate in cities, opens a boundless outlet for this cheap and wholesome article of human subsistence.—If they attempt its cultivation, and the climate should prove favorable at any point, it will long be an experiment with them, and they must pass the ordeal of borers, blight, accident, want of system and knowledge, and a thousand other difficulties which it is hoped we are about emerging from. All these will have their effects upon them, as they have had upon us, so that the youngest planter here can have no cause of anxiety in relation to a demand for his apple crop.

New England is the great manufactory of ice, and her railroads are the avenues through which it passes to the nations of the East. Since this article has been produced, a way has been opened to export our apples with it. Shipped with ice, where the temperature is kept low and equal, apples are transported into the far regions of the east, and sold at handsome profits. It is said that in hot climates they are preferred to any other fruit, and are eagerly sought for wherever they have been introduced. The ports of the Mediterranean alone will require a large supply, after the trade at them is once opened. At this moment a vessel is being loaded with apples and ice, at Charlestown, for Alexandria, in Egypt.

In England, our apples are highly esteemed, selling at from \$8 to \$12 and \$16 a

barrel, and by the bucksters at ten pence, and sometimes a shilling each. The rapid communication between this country and that, afforded by our steamships and packets, enables the exporter to get them there in perfect condition; consequently they are fast becoming an important article of trade, and are destined to become one of the principal sources of profit to the farmer. An increased supply increases the demand. Apples are higher in market in the full bearing year, than in the odd years when the supply is much less, paradoxical as it may seem. When the crop is large, the natural supposition is that the price will be low, and shippers entering

into the business largely keep the prices up. A gentleman in New Hampshire informs us that, when his orchard came into bearing some years ago, the best market he found for his apples was at Portland. This year he refused \$425 for the product of less than an acre and three-quarters, to be taken on the trees.

While, then, we would not advise the farmer to neglect his corn and grain crops, to invest extravagantly in apple trees, we would recommend him to plant a few trees of the best varieties every year, but not more than he can manure and cultivate with care.

VENTILATION.

MESSESS. EDITORS. It is an old aphorism that "those who know nothing fear nothing," and because "we live as long as our neighbors" we do not comprehend the anxiety and interest which has lately been manifested upon the subject of *Ventilation*.

Mr. A. J. Downing, in connection with his excellent work on the *Architecture of Country Houses*, says: "The want of attention to Ventilation arises from the fact that the poison of breathing bad air is a slow one, and though its effects are as certain as those which follow from taking prussic acid, yet they are only observed remotely, and little by little."

When a man is hungry and thirsty, nature compels him to cry out for food and drink, but she does not so urgently protest against slightly impure air; although in the one case a man may live several weeks without food, whilst in the other, no one has ever been known to live three minutes without air.

Whilst we go on from day to day suffering the accumulated evils resulting from our ignorance, and wondering at our want of physical health and spirits, we yet do not act, because we do not see our *neighbors* taking precautions against these evils. We are, in fact, content to "live as long as our neighbors."

It is a well ascertained fact that a healthy man takes into his lungs nearly sixty hogsheads of atmospheric air every twenty-four hours, which air, when expired, is so vitiated that but a very small portion of the vital prin-

ciple is left. Now, if we add 100 per cent. to this vitiated atmosphere for that which is rendered impure by cutaneous transpiration, and the combustion of lamps and candles, and multiply the product by 10 (the number of inmates in an ordinary family) we shall have the enormous quantity of more than a thousand hogsheads of air consumed by one family during 24 hours! Now let us take one of our best built houses heated by stoves, with perhaps, two or three fireplaces, but these carefully closed up by "fire-boards," and calculate the quantity of fresh air which circulates through this building during 24 hours of our coldest zero days in winter, when every atom of external air is, as far as possible, excluded, and then some estimate may be formed of the great deficiency, and dreadful state of the atmosphere in which we, in general, live during our Canadian winter of seven or eight months!

"It has been well remarked," Mr Downing says, "that if the air as it comes from the lungs, impure and robbed of its vital principle, were thrown off colored, so that it would not mix with the common air of a room, but remain visible to the eye, the impression that would be made upon the mind by the presence of the large source of disease, would be so strong that the first of all invariably acknowledged duties for the preservation of health, would be ventilation." It is only because bad air is invisible to the eye, and we are hence unconscious of its presence, that so much indifference is felt to ventilation. It is

true that, upon entering a room immediately from the fresh air, we are conscious of some unusual smell, but the olfactory nerves are so delicate, and so soon blunted, that in less than a minute we become wholly unconscious and indifferent; the poison is nevertheless, doing its work with every breath we draw.

If people would but reflect and reason upon this subject, there would be no further necessity of enforcing it by writing. Why do we die if our breathing is suspended but for one or two short minutes? It is because the blood must be kept pure and thin, or, such is the subtlety of its constitution and operation, that it would cease to flow through the inconceivably small channels which transmit it to every particle of flesh from the crown of the head to the sole of the foot; and, where it ceases to flow there the flesh must perish.

The air is, we all know, the only agent which thus keeps the blood pure, and enables it to circulate, and impart the vital property to the system. The atmosphere no less sustains life by imparting this wonderful property to the blood, than by supplying the place of the miasm if I may so call it, which the veins collect, and bring back to the lungs for expulsion, and which miasm, if left in the system but very few moments, would cause immediate death. Now if we further reflect that if the air is loaded with any admixture, such as the expired breath or emanations from the skin, or if its natural proportions are in any way deranged, so that it can not be breathed without producing injurious results, we must see that the air within our dwellings ought to be constantly and rapidly removed, and pure air substituted.

Mr. Downing says, referring to the enormous quantity of air required by man in order to sustain health, that "it is to vitalize and purify the blood. The human lungs are the apparatus by which this process is effected, and the atmospheric air is the agent that performs the work. In each of our two lungs there are one hundred and seventy-two millions of air cells, and every time breath is drawn in, the air passes down and fills these little air chambers. On the other hand, the blood is always going and returning to and from these air cells which compose the lungs; and in the short space of time that it remains there—only a moment—it is entirely changed in its appearance and character.—That is, it comes into these air cells of the

lungs, impure, and of a purple color, from the veins, and, having been submitted to the action of the air, goes out of the lungs red, pure, and bright, through the arteries. The arteries immediately distribute again, to all parts of the system, the purified blood, which, as it goes through the system, imparts warmth, strength and life; and by the time it is poured into the veins on its return course, it becomes quite dark, and impure again. And this process, when repeated, is what is called the circulation of the blood."

Now it is exactly in proportion to the purity, and also the quantity of air with which we keep these one hundred and seventy-two millions of air cells distended that we shall enjoy health; hence the constant advice of the physicians to take "open air exercise."

This "exercise," however, in no wise contributes to our health except as a means to an end. It causes a quicker action in the lungs which by this means have the advantage of a greater quantity of air causing a proportionate purity to the blood, and consequently its more rapid motion. All animals as a general rule, whose lungs bear the largest proportion to their bodies, are the strongest. If health and strength, therefore be so dependant upon *quantity* of air, how much more important to us must be its *quality*.

We often see the cloud of dust which we are breathing in a room covered with a woolen carpet, yet we disregard it the moment we so far alter our position with respect to the rays of light, which reveal the impurity we are inhaling, as to prevent our being sensible of it. Now reason would dictate that polished floors or well kept oil cloths should be substituted for these nuisances, woolen carpets. So also with respect to the sense of smell; reason would teach us that if upon stepping into a house or room we were sensible of an odor different from the external atmosphere there was some thing wrong. But no, half a dozen inspirations renders us insensible to it, all is right. After a few minutes delay, we are insensible to the foul odor of an unventilated room.

Liebeg, whose opinion is law in these matters, will tell you that all diseases communicable by infection or contagion—will remain for years in cloths or garments of any kind, that chests, trunks, boxes, *rooms, closets, and houses*, after lying unused or unoccupied for years may communicate disease. And all

this merely from the effects of the breath or emanation from the bodies of diseased persons who formerly inhabited them. Can any one doubt then that the very best kept dwellings, unventilated, the floors covered with woolen carpets, the windows and beds hung with stuff curtains, and the walls covered with paper, in a few years become saturated with putridity, and redolent with disease?

As a corroboration of the assertion that not only the furniture, but the very wood and walls, in fact, the whole inside of a dwelling, becomes impregnated with the breath, follow a family into a new domicile, and the very same odor will soon become apparent. Indeed, it is not difficult to distinguish the kind of disease with which a family may be affected, so palpable sometimes is the effect of the miasm in the building. I find it the easiest thing in the world to distinguish a healthy from an unhealthy house, in walking or riding along the road or street. When you see a small dwelling with four, five, or six good large chimneys, then you may depend they pay small doctors' bills in comparison to those who have but one or two 9×14 inch flues.

People in general do not reflect upon the danger of taking a dwelling which may have been for some time shut up, or one which has been inhabited by an unhealthy family. I have observed that in many instances the new occupants would be taken down with fevers. Indeed no person of reflection will ever take such a house in the present state of ventilation in this country. A house properly ventilated, however may stand for years shut up, and be in a purer state than when occupied.

But the most fruitful source of disease in our unventilated dwellings is our *cellars*. If upon taking up our quarters in a public or private house, we should be put into a room situated over a heap of dead carcasses in a state of decomposition, we would be astonished; but this would be some thing worse, in *degree* only, than the state in which we actually do live. Our cellars are the receptacles of, and, the year round filled with meat, fish, lard, butter, vegetables, and all sorts of edibles, and no one will deny that putrefaction is frequently occurring in these articles—and often to such a degree, that it is capable of being detected even by the sense of smell.

Liebig says than “the particles of miasm from cold meat alone, in a state of decompo-

sition are capable of communicating consumption!” We fancy that our floors are a protection against this manufactory of foul air, but this is not so;—all the lathing, and plastering, and floors, which it is possible to interpose, will not prevent this subtle poison from pervading every room in your house, to the very attic, especially where you have woolen carpets and fire places above the cellar,—the one facilitating its flow through the millions of pores of the flooring by capillary attraction, and the other by a direct suction, or draught upwards from story to story of your house.

But what must we think of the intellect of people who, in addition to this poisoning by inches, go into the thing at wholesale by actually supplying a hot air stove, with the air from the cellar, heating it, (which renders it ten times more virulent) and forcing it up into every room in a dwelling! A few, fancying themselves a good deal wiser than their neighbors, do bring a few square inches of the *external* air, taken from the surface of the ground, to their hot air stove. This practice is little better than the other for here they get pure carbonic acid gas, especially at night, and during calm weather. Providence has ordered that this portion of the atmosphere should be heavier than any of the others in order that vegetation may have the full benefit of that which is its very life. And this is the material with which many respectable and intelligent men fill their dwellings! So that, besides this miasm engendered in your cellars, generated by the decomposition of all these edibles, they are the receptacles of constant streams of carbonic acid gas pouring in at the windows.

To the breathing of this destructive matter, may fairly be attributed more than half the diseases that flesh is heir to, certainly all those of a pulmonary and cutaneous nature.

From its greater gravity this portion of the atmospheric air is always found near the surface of the earth, and every cave, well, hole, and nook is filled with it, as also every part of every building, which is so situated as to lie beyond the influence of winds and other motion of the air—such as cellars, between joists, and hollow walls, etc. As proof of all this, witness the numberless instances of deaths from descending into wells and mines. So filled is the space between the joists of any dwelling with this gas that it will imme-

diately extinguish a candle. A disease called elephantiasis—a species of leprosy, I believe, has, for generations out of mind, affected the inhabitants of Labrador, and part of New Brunswick. These people burrow in the earth!

* * * * *

If you hang a cage of birds in a room heated in this way, they languish and die; flowers will wither and decay, the members of the family will very soon complain of headaches and coughs, preceded by a dryness of the throat, and very frequently bowel complaints, in short, it is a species of suicide, and that not confined to the present generation unfortunately, but laying the foundation for a line of diseased offspring, providentially not a long one.

The simple remedy for all this evil, is merely a little variation in our mode of building, so as to ventilate our dwellings with air from strata 8 or 10 feet above the surface of the ground, in this part of North America; insuring a constant circulation of about fifteen hundred cubic feet of air per minute through an ordinary dwelling house. This is an operation so simple that the most stolid mechanic can not fail to understand it after seeing it once done.

I would cheerfully here give a description of how the building is to be put up, but it is not possible to do so by writing; nothing but drawings and models will be sufficient adequately to convey the mode of operations, simple as it is to the understanding.

I do not object to fire places or stoves, *but then there must be ventilation with them*, and the ventilating air must in cold weather be warmed, not heated, be carried off downwards and circulated between the joists of the first floor. Thus the cold, nine-tenths of which comes into our lower rooms from under the base, and through and between the floor boards, is kept *below the floor*. The floor is warmed by the departing warm air, the miasm of the cellar can never reach the inmates of the house; the dust of carpets is kept below breathing distance, and also carried away under the floor, and the building kept warm with half the fuel that would be necessary for an upward ventilation.

But then a house must be built for it. This is so simple that it will entail little or no greater expense than our ordinary mode of building. All that is required is that it must be understood. The architect should be able

to make *a house breathe*, and must understand its physiology as a surgeon does that of the lungs of a human being. It is to be hoped that some of our architects will, ere long, muster sufficient energy to shake off the thralldom, in which they are held by their old musty rules, in despite of all science and even common sense, and boldly adopt a system of building that shall insure health, as well as ornament, which is but of secondary importance. Upon a matter of so much consequence it is strange that none of our public functionaries have taken the trouble to make inquiry into the subject of ventilation, which is just now engaging the attention of so large a portion of the North American public. I say North American, because it is in cold climates where the ventilation of buildings is most required, and where consequently, inquiry upon that subject will naturally commence.

So alarmingly great has the mortality in our public places of confinement become that it has, upon several occasions, called forth the animadversions of the *press*; yet no effort appears to be making to meet the evils of a putrid atmosphere in which the unfortunate inmates are literally smothered.

Cobourg, Canada.

H. RUTTAN.

REMARKS.—The subject of ventilation is one of so great importance that this article has been copied, in order to direct the attention to its consideration. The statements it contains in regard to carbonic gas, are not strictly correct, however; for though a heavy gas, it obeys the wonderfully strange law of diffusibility that appertains to the elastic fluids, and it does not accumulate in low places, as would be expected by those who have a knowledge of its great density.

The access of fresh out-door air, from above the surface of the ground and a free circulation under the floor of *warmed* air, in the plan suggested by Mr. Ruttan, especially in large and sufficient quantities, by means of capacious flues, is what is wanted to secure health—essential to it. Most attempts at ventilation have failed for want of *capacity* in the flues.

SCHUMANN ON SWEET WINES.

*South Bend, Delhi Township,
Dec. 10, 1851.*

DR. JOHN A. WARDER:

Dear Sir—As much has been said about my sweet Catawba Wine, I take pleasure to inclose a certificate from our well known chemist, Mr. Chapman, who has analyzed it, and by which you will notice, that he found it to be what I had represented it to the public—the *pure juice of the grape*.

I am sorry that I have no more sealed bottles, on hand, to present one to the Wine Committee; Mr. Chapman got my last for examination. But as I have now the experience of a full year, I can give the following satisfactory explanation about it:

That wine will be clear and bright in three to four weeks after the juice has come from the press; it will then be fit for instant use and remain sweet. If bottled at that time, it will, of course, make a sediment at the bottom of the bottle, like all new wine if bottled too soon. But if bottled not sooner than after the wine has been racked off three times from one cask into another, at intervals of about two months, the wine will not then make any sediment in the bottles.

They must be well corked and sealed to keep the wine still. The access of atmospheric air at a temperature of about 80° Fahrenheit, will convert it into a delicious sparkling wine, the more so as the sweetness consists in the natural saccharine principle of the juice, without the addition of sugar. If the bottles are not well corked, and the wine is for a length of time exposed to the access of atmospheric air, it will undergo the usual fermenting process. The same will occur in the cask at a temperature of about 80°, if the bung is put in loosely. If the bottles are exposed to an extreme artificial heat, the principle of fermentation, heretofore only

arrested, will be entirely suppressed, and the wine will then remain constantly sweet and still, without inclining to ferment further at any temperature whatever. I did not make this latter experiment myself, but Mr. Longworth made it several years ago, with a bottle of my wine which I brought him myself, and which, in order to satisfy his doubt, he had for several days put away in a very hot place. The wine came out with an increased brilliancy in color, and without showing the slightest indication to ferment.

I hope these facts will be satisfactory to those who tried to depreciate the merits of my sweet wine.

—
Cincinnati, Nov. 13, 1851.

This is to certify, that I have examined several bottles of Sweet Catawba Wine, made by Mr. C. A. Schumann, labelled, "Catawba Queen Victoria." The specific gravity of which, was 1.060 water, 1.000 at the temperature of 60° Fahrenheit.

The presence of cane sugar could not be detected; I, therefore, presume none had been added.

Muriate of Baryta shows a small precipitate of Sulphate of Baryta, owing to a small portion of Sulphuric Acid; not more, however, than might be produced in the process of fumigating the casks with sulphur, before filling them with the juice, which I understand is the practice with wine growers.

The conclusion, I have drawn from the experiments made, is that the wine is from the pure juice of the grape.

W. B. CHAPMAN.

—
The wine making business in this country is still in its infancy, and I venture to predict, that in future it will often happen, that one vine planter will supercede another in

making wine, although from the same kind of grape, they will be different in taste and flavor. In such cases, the sentiments of vine planters toward each other ought not to bear the character of envy or jealousy. They ought to harmonize in all instances, and should do justice to the respective merits of each. The task for us vine planters in this country is indeed not an easy one.

We possess as yet few kinds of grapes to make good wine of; but even this wine, if made on the usual simple fermenting process, no matter how rich and admired by European connoisseurs, will frequently meet with adversities in this country. It has been and is still a frequent occurrence, that the people in this country, particularly here in the West, do not agree with foreigners as regards the taste for wine, and that sweet cider is often preferred to the best Hock or Catawba. The latter is declared sour to their palate, and I could name for instance the city of Louisville, as a place where not one gallon of Dry Catawba wine, no matter how superior in quality, would be sold. The general taste there, is sweet. My agents in New York wrote me: "Some of our customers like your Dry Catawba very much, and we could have sold more of it, but your sweet wine is generally preferred."

Reflecting on the reasons why this is so, I find them quite numerous. The use of a glass of wine is not a regular custom here in the West as it is in Europe.

The task for us vine planters, can not be to reform the habits of the people; we have rather to submit to them, and have to make our wine suitable to their palate. The truth of this has been long since well understood by Messrs. Müller, Longworth, Bogen, and others, who convert the Catawba into a sweet and sparkling wine, by adding rock candy and something else. And by thus making the fermented Catawba wine suit-

ble to the American palate, every body likes it. Though a wine with rock candy and some other ingredients added, can not properly be called a pure wine, nobody objects to it, and nobody asks for an analysis; on the contrary, every body likes the sensation of it, and I like it myself, though more as an occasional dessert wine than for daily use. In the latter case I should consider it leading to intemperance, and to consequences injurious to health.

Owing to the short crop this year, I could make very little of my sweet wine, and this I shall not bottle till it is about one year old. I also made some red wine from the Isabella and Cape grapes, which I am calling Cincinnati Claret, and which I consider a fine wine. A sample of it I shall present you in a short time. In the meanwhile I remain,

Yours respectfully,

CHARLES A. SCHUMANN.

—
What say ye all to this, wine growers of Ohio and the West! That "wine will be clear and bright in three or four weeks," we have sometimes observed to be the case when it has been exposed to circumstances favorable to fermentation. But then it is no longer the sweet juice that ran from the press, but a *spirituous* and *carbonated* liquid, in which the globules of carbonic acid gas may be seen as well as tasted. In his communication to Mr. Barnum, Mr. Schumann asserts that his wine is not fermented; he here represents it as having been in cask three or four weeks. Now it is well known, that a process is practiced which will render muddy cider perfectly clear in a few hours after it has run from the press. The same plan might be applied to the wine, if desirable. This may be known to Mr. S., but he does not so represent it, and further states, it is necessary to rack off the wine three times to avoid the sediment in the bottles. But it is evident

to the taste, and suggested by the specific gravity given by Dr. Chapman, that his wine has no spirit, though the analysis does not represent the quantity of alcohol furnished by distillation, a test, which is to be regretted, was not applied.

Mr. S. says he "hopes these facts will be satisfactory to those who tried to depreciate the merits of his sweet wine." To what facts he refers, the reader is left to draw his own inference. If to the exposure in the cask for three or four weeks, without any addition whatever to prevent fermentation, or to the

three rackings at intervals of two months, we are not informed. This, however, is known to all; in ninety-nine, or more, cases out of a hundred, grape juice thus treated will have fermented and become *wine*.

The selection of his names for wine, is a matter of fancy or taste with which he may be indulged, though most Americans prefer original names for our peculiar wines. As to adapting of his wares to the popular taste for sweets, that is a matter between him and them. The best judges will decry every thing but the *pure juice* properly *fermented*.

VINES IN POTS.

WE may now commence with the propagation itself, by means of eyes, which is the established mode, and approved by all, as probably approaching nearer to the seedling state than any other; and as information is frequently sought on this head by amateurs who attend to their own gardens, we must give our advice in regular detail.

Well ripened wood, from healthy established vines, is the best, and that with very large joints, removed with a small portion of the two year old wood, grows strongest. About one inch of the shoot above, and one above the bud, will suffice; the cutting will thus be two inches in length. Some persons cut the shoots through longitudinally, reserving three-fourths of the wood on the bud side, and most of the pith; we, however, never found any decided advantage in the practice. Singles eyes, may now be put into pots four or five inches in diameter—soil, a rich and mellow loam, or any good garden soil. Care must be taken to secure excellent drainage, and the eye must be placed an inch at least below the surface of the soil. And now a bottom heat, although by no means indispensable, will be of immense service; it will, indeed, rear them in half the time otherwise required. From 70° to 80° will be proper, and if they can be secured an atmospheric warmth of 50° to 60°, they will soon produce shoots. If they are plunged, means must be taken to prevent the worms getting into the pots; three inches of coal ashes be-

neath the pots will insure this. After potting they will want little attention until they have made shoots above the soil; a little water will be requisite occasionally. In a month they will be nice plants of about six or eight inches in height, and their pots will be full of roots; and those who wish to obtain large plants, must give them a "shift," and such may be a final one for the season. Seven or eight-inch pots will now be necessary, and a still more generous soil. Nothing can exceed an old turf which has lain in the compost yard for a twelvemonth, with one-third of its bulk of old leaf soil and good manure, adding a little sand and charcoal to the mixture, which must be fine; thorough drainage as before. They should always receive bottom warmth until the pots are nearly filled with roots; and if the eyes were started in the beginning of February, such will be the case about midsummer, when if necessary the pots may be removed from the plunging medium; caution, however, must be exercised in doing so. We would advise in this event, that the vines be double potted, that is, that the pot with the plant be sunk into another, after the manner of the tender *Ericas*, etc.; and if they are placed over a source of heat, as pipes or flues, all the better. It must be understood there is no absolute necessity for taking them out of the plunging medium; we merely recommend it in order to get them as near the light as possible, this being an all important affair.

The stem must be carefully trained up to stakes, or otherwise, so as to expose all possible foliage to the sun, and the lateral shoots all stopped at one joint from the main stem. Some persons now stop the main shoot when about six feet in length, but we would only recommend such in case of necessity; for we will suppose that another year's culture is necessary, in order to obtain a good crop. Thus regular training and stopping, and liberal waterings, when requisite, with tepid liquid manure, with a complete exposure to light, constitute the remaining culture of the season.

By October all the leaves will have fallen, and the plants may be instantly pruned back to about nine inches in length, when they may be plunged, in any sheltered and dry spot, for the winter, laying the pots on one side to keep out the rain, and throwing some litter over them in severe weather to keep out frost. In the course of January, in the succeeding year, they may again be introduced to heat as before, and must receive the final shift; the size of the pot must be in part dictated by the position they are to occupy; a pot, however, at least a foot in diameter must be used. And now, again, the most perfect drainage must be employed, and both it and the limpy turfy material must increase in the size of their component parts, in a just ratio to the increase of pot room.

It is needless to go over cultural matters again. A similar course to that of the preceding year must be followed, only they will require still more liberal watering, when the new pots are full of roots. When the buds commence growth, a selection must be made of the eyes or shoots to be reserved; and here practices differ; some retain four or five shoots, others only one or two. These points must be ruled principally by the position they are to occupy. We may merely observe, that most good cultivators reserve only one cane, and this is trained carefully, as in the preceding season, and is usually stopped at about six feet in length. This throws extra strength for a while into the principal leaves, and through them into the fruit buds at their base. The stopped shoot will soon push another leader, and this may be permitted to produce another foot or so of shoot, when it will be well to practice a second stopping. All this while the laterals are regularly stopped, as in the first year's culture.

In August or September they will sink to rest, and may be pruned immediately; the length left to bear must be entirely determined by the size of the pots. About three feet, or nearly so, may be left to a twelve-inch pot; and about four or five feet if in fifteen-inch pots; regard must, however, be had to the space overhead, as to height, etc. They must now again be plunged for their rest period; and the best place is a shed or out-house facing the north, taking care to protect the roots well.

If required to be forced early, they may be introduced to heat soon after Christmas; and now a bottom heat of 75° will be of great service, if only for a couple of months. They will require no re-potting. A little of the powdery surface soil may be removed from the top of the balls, and replaced by a rich and turfy top-dressing. It is a good practice at first introduction to heat, to form the cane into a curve, in order to make it develop the buds with more equality. As soon as the young shoots show the bunch, a selection must be made; three shoots with bunches will be plenty for a twelve-inch pot, allowing one more bunch for every inch of increase of size in the pot. Thus a fifteen-inch pot would carry six bunches, one on each shoot. Not a shoot must be left on but those carrying bunches. All the subsequent management, as stopping, etc., is precisely as for vines in a house; each shoot is stopped at a single eye or two beyond the bunch, just before the bunch blossoms, and through the summer the stopping must be continued, suffering a leader on each shoot to ramble a little occasionally, especially whilst the stoning process is going on, when they may be suffered to acquire liberal extension of foliage. As soon, however, as the last swelling commences, a somewhat close stopping may again take place, and henceforth new growths must be kept in check; such would only rob the system of the plant, for all now becomes concentration and elaboration. Throughout the whole process, as great a surface of foliage must be presented to the light as possible; and the smaller leaves or laterals must not be permitted to shade the principal leaves.

We shall now add a few maxims of the greatest importance in the way of recapitulation.

Root Management.—Water moderately at

the root when emerging from a state of rest, increasing the amount progressively as the amount of foliage increases. As soon as the berries are nearly ripe, decrease the amount slightly until the fruit is all cut, using clear water during that period. When the fruit is removed, if the leaves are green, again resume occasional waterings of liquid manure.

Soil.—Let three parts of the volume of the soil be chopped turf, nearly twelve months old.

Potting.—Let one-sixth of the depth of the pot be drainage, of imperishable materials; such as coarse boiled bones, charcoal and crocks, covering the whole with fibrous turf from which most of the soil has been shaken.

Bottom Heat.—Whether a plunging medium can be obtained or not, so place the pots as that the chief volume of the roots are a few degrees warmer than the average temperature of the house, and screen the pots from the immediate action of the sun. Pans with water in them, occasionally may be resorted to with benefit by cautious practitioners.

Top-Dressing.—Toward the middle of May, it may prove a benefit to apply three inches of rich, half-rotten manure on the surface of the pots.

Rest State.—Let the roots become nearly dry before the pots are plunged for the winter.

Atmospheric Management.—Keep the atmosphere very moist whilst the vines are budding, somewhat dryer whilst blossoming, and again a liberal amount of air moisture whilst the first swelling is proceeding, and cease to use appliances of this kind from the moment the last swelling for ripening commences.

Syringing.—Is a great enemy to a fine bloom; a good cultivator will dispense with it altogether, except perhaps at the "breaking" period.

Steaming.—Have nothing to do with so dangerous a procedure; rather moisten floors and other surfaces if necessary.

Ventilation.—The more of this the better, provided draughts can be avoided, and the necessary heat maintained; above all, be sure to give air early in the morning, if only a very little, say toward eight o'clock A. M., during January and February, and as early six o'clock during the warmer months. The

bottom warmth should always be a little in advance of the average air heat; if a plunging medium is resorted to, let 80° be the maximum. As to atmospheric heat, let it be ever ruled by the light. Commence with a dry heat of 55° through the breaking period, advance gradually to 60° until the vines are in bloom, then rise to 75°, and henceforth let this be your maximum point by artificial heat. Night heat, 45° at commencement, rising to 55° by the time the vines are in blossom; afterward do not exceed 60°. On very dull days, and during severe weather, descend to the night heat during the day. Whatever sudden advances in heat are made over 70°, let it be two or three hours after closing time P. M., and mostly by means of solar heat. It may on such occasions safely rise to 85°.

Kinds.—We think the Black Hamburg is the most general favorite; some, however, succeed well with the Muscat of Alexandria. The Muscadines answer very well; and we have seen very good Frontignans in pots.

Insects.—As soon as pruned, their stems may be dressed with the following mixture: Dissolve two ounces of soft soap in a gallon of warm water, add three handfuls of sulphur, and about a quart or three pints of lime. Stir the whole while using it.

We close with one more wholesome piece of advice. Never suffer the air in the house to be charged with atmospheric moisture when the sun is shining. Vines will scald sooner at 75° thus situated, than at 90° with dry air.

R. ERRINGTON.

Cottage Gardener.

FRUIT-RAISING IN NEW JERSEY.—Mr. Geo. W. Obert, of Pennington, Mercer county, N. J., writes us that he has a peach orchard of 3,500 trees, nine years old, which has borne six full crops in succession. It occupies twenty acres of ground. He states that in 1849 his crop cleared \$6,000. The peach crop in general was that year destroyed by frost. The orchard is on a high northern exposure, which keeps the trees from blossoming till the spring is well advanced. Mr. O. states that last spring he put out 500 apple trees of the choicest kinds, and that he did not lose one of them. Several produced apples the same season.—*Albany Cultivator.*

PARDEE ON THE STRAWBERRY.

MR. EDITOR:—Many of the readers of your Review in Western New York look with much interest for the articles you please to insert on the subject of the Strawberry, and particularly so, if having the signature of that veteran in this cause in your city, N. Longworth, Esq. With our brilliant success in raising the Strawberry, in Western New York, I believe Cincinnati is very generally conceded by us to be the head quarters in our country for the cultivation of this delicious fruit; and yet it appears from your article on the subject, that in many respects the soil and climate in our vicinity differs from yours; for instance, Mr. Longworth says, in the September number of the Review, that "the doctrine of some Strawberries bearing well in crowded beds, I can not believe." Now, this is a distinct indication to me that the habits of the same Strawberry differ largely in the different locations, for although it is generally recommended to cultivate in hills and rows, yet examples almost without number are not wanting in Western New York to prove that large beds of various kinds have borne well the year after the runners had been permitted to run and cover the entire ground and walks with plants not more than two, three, or four inches apart.—Most abundant evidence can also be produced, that a large bed of Hovey's seedlings, at least forty feet square, has borne a heavy crop the *second* year after being thus allowed to cover the ground, and this too without trenching.

The question now arises, what constitutes bearing well? To this I reply, an unlimited amount almost of testimony can be produced to prove that a plot of ground in this place, measuring fifteen feet by forty-five, and covered so completely that not a separate hill could be found, with Burr's New Pine, Ho-

vey's Seedling, and a few Black Prince and Alice Maud, (not mixed together,) produced the past season more than four bushels of fruit, besides many that were picked and eaten by visitors and the family; and in regard to size, a half bushel was picked one evening in which not a berry measured so small as two and a half inches in circumference, and some were as large as five inches, some still larger, had been picked previously. This bed was planted out on the 1st July previous, and had not been trenched nor manured before this, nor hoed, nor forked over after planting, but had been mulched with saw dust and tan bark.

Now, although this was not extraordinary bearing, for no extraordinary cultivation was given, yet it establishes my position, that the strawberry in crowded beds sometimes bears *well* with us. Rochester, the great center of strawberry culture in Western New York, would doubtless afford more ample and marked proofs to illustrate the position. I saw Ellwanger and Barry's seedling bearing well in crowded beds. The secret of success with us is not to allow the growth of the plants to be checked for a single day after we transplant them.

Mr. Longworth says in regard to Burr's New Pine, "I have cultivated this plant but two seasons, and have not given it special examination," now, it could not be supposed that with his extensive engagements, and great devotion to the cultivation of the grape, he could conveniently give a few plants of Burr's New Pine "a special examination," personally, for any length of time, and yet we have persons in this vicinity, and I doubt not in yours, whose business arrangements permit a daily personal examination during the growing season of every strawberry plant and every variety in their gardens. I have

very little confidence in the examination and reports of gardeners and laborers generally. I have an aged neighbor who, by a close personal examination of the habits of the strawberry, thinks he can tell from the peculiar fiber of the roots of each kind, what variety of the berry the plant belongs to, and, according to his view, to which part of the root the pruning knife needs to be applied, for he *practices root pruning* of the strawberry extensively. Whether his theory and practice is well grounded or not, I will not pretend to assert, but that the peculiar form and position of the fibers of the root of the Burr's New Pine, is marked and distinct from those of Hovey's Seedling, is apparent to any accurate examiner. At all events, this gentleman is by far the best cultivator of the strawberry I ever saw, and his success is astonishing, but he has the most abundant leisure, and his observation is extremely accurate and minute.

Many of us have obtained specimen plants of McAvoy's superior and Longworth's prolific, and have very large expectations in regard to them. We shall assuredly give them the best cultivation we are capable of, and hope they will, in our genial soil and clime, surpass all other kinds.

Please believe me, I have no desire in this, to provoke a reply from Mr. Longworth. A mere novice like myself would be but too happy to sit at his feet, and receive instruction from him, and yet useful hints are often obtained by a free interchange of thought on these various subjects. R. G. P.

Palmyra, Wayne Co., N. Y., Dec. 12, '51.

REMARKS.—This communication from Mr. Pardee is very acceptable, for his own sake, and because Western New York is similar to our own country in many respects. As to the strawberry, it really seems from this account, that although Cincinnati has taken

the lead in its wholesale cultivation, she may have to yield to Rochester at last on the score of productiveness. But allow me one word as to what we call *bearing well*; we have defined it to be, *setting perfect fruit at every flower*: always supposing that the number of trusses and their size will depend upon the strength and sort cultivated, and the number of berries set will depend upon the character of the flower and its due impregnation, by the aid of insects or otherwise. See previous numbers of the Review.

It is well known that very crowded beds do sometimes produce an abundance of berries, but with us they are seldom so large as those described by Mr. P. Root-pruning, applied to strawberries, with a view to their improvement, is a new idea—it may have its value, but we have an old fellow here in the shape of a white grub, who pursues it quite too thoroughly for our climate, as he generally causes the death of the plant by cutting off all the fibers. He, too, appears to be able to distinguish the different kinds, being partial to some varieties; but he will even attack the hard woody main roots of our roses, to their utter destruction—and sometimes also undermines large patches of grass upon our lawns with equally disastrous effects. Who and what is he in full dress, and how may we prevent his ravages?

Those who know Mr. L. best, are satisfied that with all his "extensive engagements," he is a very close observer, and the constancy of his devotion to his strawberry beds may be detected on any and every morning during the flowering and fruiting season—none yield to him in this respect.

Sincerely trusting, not only for the honor of Cincinnati, but for your own gratification, that our new seedlings will be as much larger and better with you, as the kinds you mention are finer than with us, I await patiently, hoping to hear the result.—ED.

NITROGEN.

To the Editor of the Gardeners' Chronicle.

IN your article on this subject you, appear to have overlooked one source from which plants must derive a considerable portion of it. Every student of chemistry, is told in the rudimentary treatises on that science that if an electric spark be passed through a jar containing atmospheric air, the latter is converted into nitric acid. Presuming this to be true, does not it warrant our supposing that an immense supply of nitric acid is generated by the electric explosion of thunder storms? There must be millions of acres of electric clouds exposed to these explosions, and thousands of hogsheads of nitric acid generated thereby. At least so it appears to me; but not being a chemist,

I may be wrongly informed in the matter. Will you kindly say whether I am or not?

T. G. CLITHERAL.

[Nitric acid is unquestionably formed in the air in other modes than by the oxidation of ammonia; not merely by flashes of lightning, but also when any substance is burnt in the air. The quantity, however, thus generated is probably much less than that resulting from the oxidation of ammonia. The rain which forms in the most violent thunder storms, contains but a minute trace of nitric acid. It is only in the immediate course of the electric flash that a small quantity of nitric acid is formed; and many thousand electric sparks must pass through a jar before any appreciable quantity of air can be changed into nitric acid.]

ON THE DIRECTION TAKEN BY PLANTS.

BY M. M. MACAIRE AND A. DE CANDOLLE.

I TRUST that no one will object to the introduction of this article into the pages of the *Review*. Even though it should not be acceptable to the practical minds of some readers, still, to such as are most practically constituted, it is earnestly recommended as a study. The wise and learned have always done much for the benefit of the man of every day life, and they deserve credit for their labors, which so often conduce to the happiness and well being of the masses of human society, who are unavoidably less scientific.

MACAIRE had previously published researches on the curling of Tendrils. In these new investigations he chiefly occupied himself with the tendency of the stem and leaves towards the light, rejecting the old explanation by a curling of the stem, as given by De Candolle and Dutrochet, and sought to make out whether or not light exerts an attraction. He placed some Duckweed in a longish glass vessel of water,

covering one half of the glass with black paper, so as to darken it, and then fixed a partition between the light and dark halves, reaching nearly down to the water. The duckweed in the dark half was bleached, but did not change its position to approach the light. Peas, beans, and mustard seeds were placed on little floats of cork in the dark part; they germinated, and even flowered, the stem elongating towards the light, but the cork floats were not moved. When the stem projected above the partition, it took an upright direction and became green. Peas were placed upon floats in an upright glass covered with black paper, with only a single slit in it, to give passage to light, also in a blue glass in like manner, but the floats did not approach the slit where the white light was very strong. Macaire's observations, according to which these experiments seemed to show that white light caused the production of rootlets, on the side of the root turned towards it, and blue light on the side turned away, appear from subsequent observations of M. Clos, to have been accidental phenomena, since the rootlets always shoot out in longitudinal rows, alternating with the fibers of the woody mass of the

root. Macaire demonstrated the incorrectness of Dutrochet's assertion that the cause of the curvation is to be found in the modification of the endosmotic process by the influence of light; he also denies that heat exercises an influence on the endosmose, so that the ascent of water into an endosmometer filled with one and the same solution of sugar is equal at 65° and 10° Centigrade, if the expansion of the glass be taken into account. This leads De Candolle to propose that new and most careful experiments should be made, since he has observed that the endosmose goes on much more rapidly in an endosmometer kept in a warm room, and in summer than at a lower temperature. Macaire further states that light has no influence upon endosmose; and since light and heat are such powerful promoters of vegetation, he concludes that endosmose is not an important operation in the growth of plants. He also does not believe that a fluid can rise by endosmose through several membranes. He closed the ends of three tubes of different diameters with bladder, placed them one within the other, filled them with syrup, and then put the whole into pure water, which only rose into the first tube. The same occurred in experiments made with other fluids, such as gum, alcohol, etc. De Candolle repeated the experiment, by filling with syrup an endosmometer, closed with double bladder, on the upper end of which was attached a bladder also filled with syrup, the whole being placed in pure water. At the end of four hours the bladder was distended and not only had the water penetrated into this, but into the tube, through the double bladder. Macaire has also confirmed that statement that the position of leaves depends upon light. When, for example, he lighted a leaf from below, and threw shade over the upper face, it turned round. He reversed twigs, and observed as Bonnet did a twisting of the leaves, remarking at the same time that in leaves which had the two surfaces of very different color, the twisting was effected more quickly than in other cases; for instance, bramble and raspberry leaves twisted round in less than two hours. According to Macaire the twisting takes place sometimes in the blade of the leaf, and sometimes in the stalk. Leaves of lilac and polemonium *cæruleum* twisted back by a spiral curling of the leaf; leaves of beans, the raspberry,

chestnut, maple, geranium and cercis, by the petiole. If the same leaves were reversed under water and the petiole fastened in a hole, they turned over by the lamina. A leaf deprived of its stalk and laid upon water, the under face turned toward the sun, rolled itself together like a ball, to expose its upper face to the light and hide the under surface.

When the leaf was placed under water on a float the reversal was effected without displacement. Thus the light does not attract any part of the leaf towards itself. In order to try which of the rays of light were the agents in the production of this phenomenon, Macaire laid leaves under red, blue, yellow, green, and violet glasses, after having accurately determined which rays were actually transmitted through the glass. When only the red rays passed through, there was no turning over of the leaves; under blue glass, which transmitted also some red, and violet which transmitted red and blue, the leaves turned over, more readily under the latter. Macaire also instituted experiments in order to determine the effect of light on the evaporation of water and the decomposition of carbonic acid. When the lower face of a leaf received light, the evaporation of water was stronger. With leaves of the chestnut the difference in the two first hours amounted to a proportion of 13-6 to 11-2.

As the leaf dried, the difference diminished and disappeared. Detached leaves with their stalks placed in water, and receiving their light on what is properly the under side, showed an evaporation twice or three times as strong as when the light shone upon the upper face. Hence why the turning over of the leaf is so injurious; it causes them to wither. Under colored glasses the strongest action was with the blue, then with the violet and the green rays. Sometimes blue light produced stronger evaporation even than white, while yellow light always displayed less power. The decomposition of carbonic acid and excretion of oxygen only take place in cellular tissue which has not been disorganized. A leaf of a *Rochea* stripped of its cuticle and placed beneath water containing carbonic acid, evolved oxygen, which however scarcely came from the cells of the surface. An equal quantity of cellular tissue squeezed down and placed in like manner under water did not give off any

oxygen. Thus it is not the green substance but only the organized cellular tissue which possesses the power of decomposing. When the epidermis remained this was stronger. Leaves hung up in bell glasses filled with water containing carbonic acid, and lighted sometimes upon the upper and sometimes upon the under face, the side of the bell turned away from the light being covered with black paper, gave off twice or thrice as much oxygen when they received the light as usual, upon the upper side; and the difference became more and more evident the longer the experiment was kept in operation. When the leaves of Camellias are wetted, the stomates close; the evolution of air then takes place from the petiole, and the bubbles may readily be collected while arising from this part; experiments made with these showed that when the light was re-

ceived on the upper side a quantity of bubbles came forth, while when the underside was illuminated very few were produced. Thus leaves which are lighted from below evaporate less water and decompose less carbonic acid. How this acts on the turning over of the leaves is still a mystery. The evaporation can not act in this, for it is prevented under water, and yet the leaves turn round in such a condition. The excretion of the oxygen is not arrested by the submersion of the leaves in water; this, as well as the revolution of the leaf, occurs under the influence of light. It must therefore be through the distention of the tissue by oxygen, and the fixation of the carbon, that the leaves bend, curl, or twist upon their petioles. The cause is evident, but we do not know how it acts.—*Botanical Gazette*.

A SUCCESSFUL WIRE FENCE.

MESSRS. EDITORS: In the spring of last year I constructed a mile of wire fence in the following manner: I sunk posts two feet in the ground, from ten to twelve feet apart, and inserted a rail in the top $4\frac{1}{2}$ feet from the ground; about 11 inches, below this a strand of No. 11 wire was drawn through half inch holes, bored through each post, and two feet from the ground another of the same size. This completes the fence. The rails were pointed and post holes bored before taken on the ground so as to expedite the work. The wire was strained with a lever in distance from 15 to 20 rods; the ends connected by blocks about two inches in diameter, so as to prevent a breakage by too sudden twisting or bend in the strain, and secured by pegs driven in the same manner as in drawing up a cord for a bedstead, and having arrived at the end were secured by a bolt and screw.

Now for the expense. The quantity of wire was about 320 lbs., and cost 7 cents per lb., making \$22 40; and if rails and posts are worth, on the ground, \$4 per hundred, this would be \$38 40; setting say ten days \$5, bolts and screws \$2, boring and pointing \$6; this makes the fence cost about 23 cents per rod.

Now, Messrs. Editors, permit me to say

that I think this kind of fence the best and most efficient of all wire fences that have hitherto been brought into public notice. The rail at the top apprizes cattle of an enclosure, while the wire below being strained tight causes a vibration against their noses apparently not very agreeable as they invariably face right about after looking at or trying it. I have proved this fence through two grain seasons and have no hesitation in recommending it to my brother farmers. That it is superior in every respect to the common post and rail fence is to my mind beyond all doubt, and with the exception of the pine board, is the fence of my choice above all others.

Keep the strands tightly drawn so as to vibrate to the touch and little fear need be entertained even about the most determined depredator of the neighborhood. I have painted the wires with tar to prevent rust, and find that cattle dislike the smell, while it has a tendency to resist the extremes of heat and cold, neither of which appear to have affected mine in the slightest degree. In conclusion, I may recommend this mode of fence to all and especially to those whose locations are distant from the timber.

GEORGE CLARKE.

Prairie Farmer.

TIMBER IN OREGON.

A letter from Oregon, published in the Baptist Register says:

"Forests, on the bottom lands, and on mountains too, when not precipitous, are made up of an astonishing burthen of timber. Trees stand near each other; the number on an acre is great. Large, very large trees are frequent, yet the trees are of useful size, and a prettier grove from which to select building timber, a carpenter can not desire to enter. The trees are tall, straight, and hold their size remarkably. The keel of the steamer Lot Whitcomb, is 160 feet long. The tree from which it was hewn measured twenty-four by twenty-seven inches in diameter at the butt. Mr. Abernethy, at Oak Point, sawed 101 feet in length of saw-logs from a fir tree, the butt measuring 33 inches, and the top 16 inches.

As beautiful a tree as I have ever seen, stands on a claim of Judge Strong, at Cathlamet, a drawing of which was recently made for a London pictorial newspaper. It is 10 feet in diameter at the bottom, and 230 feet high. But trees are found that measure 300 feet as they lie extended on the ground, and near the coast 200 feet in length of saw-logs have been taken from a tree on more than one occasion. Fir and

spruce run up, spire like, farthest among the clouds, never throwing out any large lateral branches. The quantity of timber would be inexhaustible, if felled only for lumber purposes.

These timbers split freely. They are split into rails and shingles, and at a distance from saw-mills, into siding for houses. Such weather boards are over eight feet long, and half an inch in thickness.

At Pacific City I went out with a proprietor of a saw mill to see the manner of felling spruce timber. With a large auger, a hole is bored through the green standing tree, or sap part of the wood. Then a coal of fire is put into the hole. The draught of air sets it to burning, and in from six to twelve hours according to the size of the tree, it falls with little or no more waste of wood, than would be used by an ax-man. It is then butted and cut up with the saw. Thus, 15 minutes with the auger does the work of half or two thirds of a day with an ax. Fir trees, are not so felled for lumber. The white fir (which is nearly the same as the balsam fir of the States) does not burn sufficiently well, and the yellow and red burn too freely, and waste the timber.

FRUIT DRYING APPARATUS.

FRUIT DRYING APPARTUS.—The best means of preserving the surplus of the vast fruit crops which will in a few years be raised in all parts of the country cannot fail to become a matter of general interest. We copy from the last number of the Michigan Farmer the following description of a fruit-drying house, which appears to be a good one, but we would suggest the use of fine netting made of hard twisted twine, instead of lath screens; and a good ventilator at the top of the building for the egress of the heated air as it becomes continually loaded with the moisture of the fruit. The free circulation of the air, so essential to rapid drying, would doubtless be facilitated by allowing a space between the screens and the outer wall.—*Albany Cultivator*.

"Having a large orchard, consisting of 500

apple trees and 150 peach trees, which have just commenced bearing, I found it necessary to adopt some method to secure my fruit, and drying presented itself as the safest and most profitable way. I built an upright, nine by eleven, eight feet in hight, on a good stone foundation, placing a common twelve-light window in one end and in the other, fronting the house, a door. In the end where the window is I have a chimney. The walls are eight inches in thickness, arched and plastered inside. The inside work consists of screens, 25 in number, two feet three inches wide, twelve on each side and one over-head. These are supported by two-inch square posts in each corner, in which mortices three-quarters by one and a quarter inch are made to receive a railing to support the screens. The rails

are received at the other end in a gain mortice, and may be taken out at pleasure.

"The screens are made of wood in the following manner: three strips of three quarters by one and a quarter to fit the inside (the middle one rendering it stiff). Across these are nailed small slats, near enough together to retain fruit when dry thus making a light, stout, and durable screen. These are suffi-

ciently large to hold from one to one and a half bushels each, which enables me to put up thirty or thirty-five bushels at a filling. By means of a large box stove these may be thoroughly dried in thirty-six hours, and then refilled. The fruit dried in this manner is of superior quality, being much better in flavor, and presenting a cleaner and neater appearance than when dried in the ordinary way."

RE-INVIGORATING OLD FOREST TREES.

SOME Ashes that were considered old trees more than sixty years ago, were, as if by accident, made the subject of an experiment. About twenty years ago, when some alterations were making, these trees stood somewhat in the way, and as they appeared to be in an unhealthy state, with a great number of dead branches upon them, sentence of removal was nearly pronounced against them. However, they were allowed to remain. To make up a bank where shrubs were to be planted, a considerable quantity of peat was used, and the roots of the ash trees got a good covering of the peat put upon them. It was no wonder that the old trees made little progress the older they grew, for the food in the soil in which the roots were, appeared to be exhausted, and the trees were dying, branch by branch, and at the rate at which they were giving way, would have soon made them fit for fire wood. But the peat, although a coarse kind of food, was quickly seized upon by the ash roots, and to all appearance made as welcome as a supply of provisions to a starving garrison after a long siege; for the young fibers were found in clusters among the partially decayed matter that was within their reach. The trees soon assumed a different aspect—a more healthy appearance—they were rescued from death of a lingering nature, and started afresh into life and vigor. Their foliage was of a dark green; the shoots were strong, and the layers of alburnum, or sapwood, increased in thickness. Although the ground above the roots of the ash trees has been for many years covered with evergreens, the ash trees still continue to thrive, although the evergreens must deprive them of a considerable part of the food which they ought to have, and also of the sunlight, for the ground is

doubly cropped as is too often the case in different departments of cultivation, as well as in the growing of timber trees.

From the cases I have seen from time to time, of decaying forest trees becoming healthy, when proper food was put within the reach of their roots, I would be inclined to think that the diminished increase of the diameter of the trunk of some species of trees, after a certain age, is the result of starvation in one shape or another, for it has been observed "a very large proportion of plants appear to be capable of an almost indefinite period of existence, if it were not for accidents and diseases, independent of old age." And there is much ground for believing that many accidents and diseases would be prevented, if the natural wants of forest trees were better understood, a knowledge of the food they require, of the benefit of sunlight, of the functions the leaves perform; in short, a knowledge of vegetable physiology, and of the agents required for successful culture. In many parts of our country we meet with a solitary tree, commonly an ash, or it may be an elm, or a fine specimen of Scotch fir, growing far apart from other trees, and we often wonder how they came there, or were allowed to remain. Sometimes there is a small clump of trees, some of them fine specimens of their kind, others in the last stage of existence, bearing the marks of the buffetings of many storms, and it may be of a short allowance of provisions. Old age and poverty are ill to bear; in the vegetable kingdom, even when they assail the monarchs of the woods, they make the strong yield before them. Neglect, and the destroying hands of admiring pilgrims, have wrought the destruction of many a noble plant, and nothing remains for the gratification of future

generations, but the spot on which they grew. If our trees could speak, many of them would cry out, "gentle woodman spare the tree." When inquiry is made respecting these old weather-beaten relicts of a by gone age, we commonly learn that once on a time a cart-house stood near by, or it may be, an old farm-steading, that the trees grew near the garden, and they are all that remains to mark the spot where numbers of the human family were born, lived, and died. It may be a long time before much manure can be spared for growing forest trees; and there are some kinds to which it would do more harm than good, if it were applied, such as

the pine and fir trees; but much is thrown away or allowed to waste. If applied to the purpose of arboriculture, there would be both pleasure and profit derived from the application. Many a tree may be seen growing in soils naturally poor and unfitted to carry heavy timber without assistance; and trees considered by many to be in the last stage of existence, may be made to renew their growth; for if you give a tree room to grow, and food to live upon, vegetable physiologists will not be able to tell how long it should live nor how large it should grow.

PETER MACKENZIE.

Gard. Chron.

ANALYSIS OF WINES BY DISTILLATION.

Cincinnati, Nov. 24, 1851.

In 1841 I commenced analysing wines from different parts of Champagne, in order to discover their relative proportions of Alcohol.

I assumed a quantity, one hundred litres, about twenty-five gallons, as my unit, and the quantity of absolute alcohol produced is represented in decimal portions or quantity. This explanation is necessary, that my experiments be not confounded with those of many chemists, who have too often copied from one another, and who have used the Baumé which is not a decimal scale.

WINES OF 1840.

	Litres.	Centi- litres.
Nov. 20, from Verzenay, produced	11	15
" " " Ay, "	11	67
" " " Epernay, "	10	25

WINES OF 1841.

Nov. 20, from Verzenay produced	11	00
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In these wines there was no more of the saccharine principle, that is to say, all the alcohol was formed.

WINES OF 1842.

Dec. 29, from Rilly, produced	10	14
" " " Ay, "	9	01
" " " " "	9	75
" " " Verzenay,	11	02

These contained some sugar; their fermentation was not yet completed, and I discovered by another experiment that it was necessary to add to the Rilly 1 litre, to the Ay 2 litres, and to the Verzenay 75 centilitres to make up the amount of alcohol they should have contained.

WINES OF 1843.

	Litres.	Centi- litres.
Nov. 30, from Rilly produced	8	10
" " " Ay "	8	05
" " " Verzenay "	9	00

These had completely fermented.

WINES OF 1846.

Passing-over the years 1844 and 1845, I found on

Dec. 15, from Ay produced	11	00
Nov. 14, " Flaville "	10	30
" " " Verzenay "	12	14

These wines were not entirely fermented, as they afterwards furnished a half litre more.

AMERICAN WINES OF 1849.

Nov. 14, Louisville produced	9	84
" " Müller "	9	25
" " Kuhny "	11	64
" " Schneické "	11	00

These were not wholly fermented; they should have one litre added.

WINES OF 1850.

	Litres.	Centi- litres.
Jan. 27, Yeatman produced	8	00
" " Buchanan "	10	23
" " " "	10	50
" " Tuferber "	11	33

These should have 50 centilitres added.

WINES OF 1851.

Nov. 21, Tuferber produced	11	20
" " Mottier "	11	23
" " Bauer "	10	70

One litre and 15 centilitres should be added to these results.

To compare these experiments with those made by Julia de Fontenelles and Brande, the product of alcohol might be multiplied by .92. These gentlemen found that champagne produced $12^{\circ}.61 \times 92 = 11,60,12$, that is, 11 litres and 60 centilitres is what they found in 100 litres of wine. We can not be governed by experiments with sparkling wines, but these gentlemen have been no more fortunate with other wines, because they were ignorant of the age and overlooked the fact that most of the samples which they examined had been mixed with alcohol, and, since they pretended to know the amount of spirit contained in the wines of a country by analysing one kind, without taking account of the soils, exposure, cul-

ture, of the care exercised in gathering grapes, nor of the art of making the wine and treating it, it therefore becomes necessary to make the experiments, not for the instruction of the reader, but to make a great book, even though it should be filled with errors.

FOURNIER.

NOTE.—In the transactions of the Cincinnati Horticultural Society for 1846, is found the following analysis of wines by Dr. W. B. Chapman :

Catawba wine, from N. Longworth's vintage of 1845, by Tuferber, contained 11.5 per cent. alcohol.

Catawba wine from Rintz's vintage of 1845, 11 per cent. alcohol.

Hockheimer, a Rhine wine, seven years old, of Messrs. Little & Engs' importation, contained 7.5 per cent. alcohol.

Red wine from P. Bates' vintage, 1845, contained 9.12 per cent. alcohol.

From this analysis it appears that American wine contains a much greater per cent. of absolute alcohol than the best Rhine wine, and will compare with the best European *pure wine*. It must be recollected, however, that in those days some wines had sugar or spirits added to them by the manufacturers, which is not now done.

NATIVE SWEET ORANGES,

We observe daily arrivals of fresh sweet oranges from the plantations along the coast, culled mostly just before they are ripe, mingling the bright yellow of maturity with the delicate shade of green which gives so peculiar a beauty to the fruit in its juvenescent state. The demand for these oranges is yearly increasing, and on many plantations the proceeds of their sale constitute a very important item in the domestic economy of the housekeepers. The sweet creole orange is in our opinion far superior to that sent here from Havana or other foreign ports

The quality may not be superior or even equal, because little attention is paid to pruning the trees in this State, or to thinning off some of the fruit in order concentrate the juices and vigor of the tree on a smaller crop. As it is, however, the native oranges must always command a ready sale in our markets and on the fruit stalls, not only because it can be purchased at first cost for a lower price than the foreign fruit, but that it can be brought into market in a much fresher and more juicy condition.

N. O. Picayune.

ERNST ON HEDGING.

DR. WARDER:

Dear Sir—The leading article, in your December number, on Hedges, seems to me to call for some remarks. It is a subject of too much importance, to the agricultural and horticultural public, to be passed by as a common place matter. I am well aware that this is a progressive age—that new lights are constantly appearing to the vision—that the old land marks are no longer deemed reliable. Still, to the inquiring mind, the embarrassing difficulty constantly presents itself—which of the new lights it shall follow. We first pursue this, and then that, with avidity and all imaginable zeal, until wearied with disappointment, we leave the phantom chase to be renewed by some other novice, the result of whose efforts are no less disastrous, until scepticism and doubts, in the final success of any plant, or system of treatment, are the consequence. To this source I conceive may be traced much of the cause of mistake and disappointment; it is the eagerness with which we adopt the views and notions of those who undertake to teach us. We are so accustomed to this everlasting change and something new in the common affairs of life, that we apply it here, without stopping to inquire its reasonableness, or the knowledge and experience of the source from whence it emanates. It is all sufficient to our purpose that it is something new, though it may be a worn out garment, which has been drawn from the musty shelves and renewedly brushed up, no matter by whom.

Your first correspondent whom you introduce, and from whom you quote, after a few sensible remarks on the importance of hedging, and the error of employing "exotic plants in the experiments," falls into the common error of recommending plants,

of whose fitness he evidently knows nothing, viz: the Honey Locust, (*Gleditsia triacanthos*), and the Crab Apple, (*Pyrus coronaria*), and refers to an old neglected hedge on Col. S. Cloon's farm, as sufficient evidence of the value and adaptation of the first named plant. You say "to this I append my hearty approval, in regard to the Honey Locust, which I have not yet seen fairly tried." Now, this unqualified approval and recommendation of a plant which you have "not yet seen fairly tried," is to what I demur. This plant has not been neglectfully passed by. It attracted the attention and stimulated the hopes, not of the theorist alone, but the practical hedger, since the country has been settled, until the effort, practically to apply it, has left it hardly a friend. At all events, those who remain such, ere they again press its claims on our attention, should be enabled to point at least to one specimen of success among the many efforts to bring it into use, east, west, north and south, and not put us off by pointing to an *old neglected hedge row*. I have seen many attempts but not one of them successful.

The other plant which your correspondent recommends, is the Crab Apple, and which you say "has proved itself a beautiful hedge plant." I might here ask you, with some propriety, *where* in our region has it proved thus? I am aware that it has also long attracted the attention of cultivators of some note, but I know of no success justifying its recommendation for general fencing and protection.

Then you quote from an article in the *Horticulturist*, to show that the Siberian Crab is also a suitable and handsome hedge plant. This may be true for the North, as it is of other things, which fail here. Can

you point to an instance of success here, where we want light? [Wait and see.]

Next you introduce a communication from a western correspondent, inquiring on points in reference to the Osage Orange hedging about Cincinnati. To which you reply, and when speaking of your want of confidence in Mr. Bateham's method of trimming, you say, "Still less disposed am I to consent at all to the feasibility of the plan pursued in our great Cemetery, by which the lot holders must be taxed with the support of a fat, full-grown Englishman, and one or two aids." Thus you proceed to indulge yourself in sarcasm, without much regard to matter of fact, and close your comments on the point by saying, "It, no doubt, looks very pretty when first done, provided the shoots are of even size and length, and in summer, the first summer, it will be a pretty green fence, not much thicker than a board paling—but what will it be in three years?"

Have a little patience, Doctor, your limits of three years will test its correctness. The object aimed at, is a close and broad base, a fence impervious to man or beast, with sufficient height to guard against intrusion over it; not the economising of room, or unnecessarily to tax the lot holders. It may prove a failure, but I shall be greatly disappointed if this hasty judgment of condemnation does not prove as great a misconception, as mistaking a *tall, lean, hard working* Dutchman, for "a *fat, full grown* Englishman." A little more candor would certainly be more appropriate to a *Horticultural Review*. I have elsewhere explained the method pursued, and will not here repeat it, but await the result. Suffice it to say, I have no reason, so far, to doubt its entire success.

Indulge me before I close with a few remarks, on the result of near twenty-five years observation and experience, with the

influence of climate on plants and hedging. Having, in my boyhood, in my own "father land," imbibed a strong love for the beautiful and graceful hedge, which there lines every roadside; no other stimulus, than its recollection, was required to prompt attention to it, at the first moment I became a land owner. Consulting the best authors, and such other experienced aids as I could command, I went to work with a corresponding zeal. My first experiment was with the Privet or Prim; of this I had nearly half a mile planted, which grew and flourished as beautifully and luxuriantly as the heart could wish, until it became necessary to bring it to a stationary point by the shears, it then became affected in spots with a blight, producing death; this spread until my beautiful hedge, the admiration of every one who passed by, became a most unsightly and worthless affair.

Next I attempted with several varieties of our native white thorn, which I found growing indigenous on my land. These all grew finely while young; but in the process of forming the hedge, when it became necessary, like the foregoing, to bring it to a stationary point, by summer shearing, the leaves turned yellow, and dropping off, left the plants naked of foliage after midsummer; from its mischievous effects it has never recovered.

I also experimented on the Honey Locust, the plants of which I raised from seed; these flourished beautifully, but after being planted in hedge rows, and as they grew larger, they commenced dying out, satisfying me that it is not a plant which will bear crowding, or subjection to the hedge form.

Then I planted the Washington Thorn, and Buck Thorn—both grew beautifully—the former throwing up straight and vigorous stems after each spring's cutting down, with but little disposition, however, to form

laterals, or to fill up below. It continued thus to flourish until it became necessary to plash it, since which it is evidently becoming enfeebled, and shows symptoms of speedily sharing the fate of its predecessors. The Buck Thorn has, on the contrary, evinced a hardiness and ability to flourish under every treatment to which it has been subjected, recommending itself very strongly to my confidence as being well adapted for hedging in our climate, though a northern plant. It is remarkable for spreading at the bottom, throwing out strong laterals, almost at right angles, near the ground, and is dwarfish in its habit of growth, but has no thorns, which makes it undesirable for an outside protector. Still, by age it forms spurs which are stiff and pointed, so that with care in plashing it will make a capital fence, and certainly one of great beauty. The plants are freely raised from seed.

I have seen the fruitless attempts to bring the Black Locust, Sweet Briar and other native and foreign plants into use for hedging.

Lastly, I have been attentive to the Osage Orange. Every step in my practice with it, has been to increase my confidence in its capacity to supply the desired object. Though disposed in rich soils, when cut down, to throw up a rampant and strong growth, it is also (but less than the Buck Thorn) remarkable for throwing out laterals near the ground, and readily to form a close, compact base, if this rampant growth is judiciously controlled, so as to prevent the sap from being all absorbed by it. It is a most voracious feeder, throwing out its roots to a great length after nourishment, very much in this respect resembling the grape; it can not, therefore, be expected to flourish on poor fare. It is also a dwarfish growing tree. These traits, with its numerous strong and sharp thorns, fit it peculiarly for hedging purposes on our rich bottoms and hills.

Should it prove capable of withstanding the severity of our summer heat and droughts, of which there is not much doubt, it will be of incalculable value to the country.

With due respect for the feelings of zealous advocates, I feel that I hazard nothing in saying, that as yet hedging for fencing and protection, in a practical point of view, is only in the process of experiment with us, aside from the crude notions which have too much predominated to mislead. We have been accustomed to look to Europe for lessons of instruction—a land in which almost every variety of tree is made to assume the hedge form with entire success—where the solar rays are far less intense and severe. To this source we have looked for instruction, and attempted to carry their practice into effect, without duly considering the difference of climate and its effects. Plants, under their comparatively mild and more humid atmosphere, are sheared through the summer and exposed with perfect impunity. If the same treatment is applied to them here, and divested of foliage by the shears or hedge hook, while under the influence of a partial suspension of vegetation, for want of necessary moisture in the earth during the excessive droughts which almost always occur after midsummer, and thus exposed to our brilliant sun's rays, the most pernicious effects on them will be the consequences, and it will not require many repetitions to cause disease and their destruction. That this is no visionary speculation, I need only name the fact, that the plants (except the first) on which I have experimented, are indigenous to our soil and climate, where, in their natural state, and isolated, they flourish most luxuriantly. I am quite well aware that almost all young woody plants of the deciduous tribe will bear cutting down, no matter how low, so that it is not below the neck, or the formation of the roots, and throw up a strong

growth; but it is only safe to do this in the spring; if repeated after June, it is at the imminent risk of the destruction of the plant. The more rampant its growth, the greater care is necessary in checking it up too suddenly and severely.

While, however, I would inculcate caution, to those who are inexperienced in hedging, against the evils of too much severity in pruning at the improper time, I give my full sanction to the necessity of so pruning as to secure a close and compact base. If a plant will not bear this treatment, it had better be discarded, for without such compactness a hedge is not worth the trouble of planting. This is one of the important facts which we have yet to learn, whether in our hot climate it is possible to secure, on a level surface, a close and compact base for any length of time; whether the rarified heat near the ground will not destroy, for some distance up the plant, the lower branches. In Europe many of the hedges are grown on raised embankments, or ridges, with a ditch on one side or both. This admits the free circulation of air to the lower branches, by which they are kept in a healthy condition. My hedging has mostly this advantage, being planted on an embankment, supported on one side by a wall. It will, of course, be understood that my remarks are intended to apply to our own region and consideration, and not for a northern latitude.

Very respectfully,

A. H. ERNST.

Spring Garden.

REMARKS.

Unwilling as I am to occupy so much space with this one topic, I can not forego the opportunity, here offered, of adding a few hasty replies to this article, just received from my venerable friend, whom I am delighted to have drawn out, (even in gentle wrath,) after

his long silence, which has been a matter of remark among the readers of the Review, who remember his introductory article in the first number issued, which induced pleasing anticipations as to his future productions.

Thanks are now given for his experience, so freely offered; experiments are highly valued, even when failures, they may serve to illustrate and to strengthen the principles involved.

He facetiously alludes to the facility with which our people may be led away with every novelty that is offered to them. This may be true, to some extent; but I have not found them so very easily led into difficulty, and I shall ever be careful in advising them as to entering upon untried paths, except when the testimony appears very favorable to the success of the *experiment*. Too often the fault of the failure should be laid at the door of the people, rather than attributed to the teacher himself, or his plans; and the fact that "frequent failures produce mistrust," may be much more philosophically explained, by observing that few of the plans recommended have been thoroughly pursued; or, mayhap, some one has blindly followed the *letter*, without the enlightenment of that Guiding Star, *common sense*.

Mr. ERNST, and the reader, will please to observe the guarded manner in which the Editor has recommended the Honey Locust, and some other plants, to their attention, and urged further experiments—always coupled with an earnest desire that proper treatment, judicious, and thorough trimming be applied. So much confidence have I in the adaptation of this plant for the hedge, that I should be glad to set a mile of it in the spring, if the seeds or quicks should be at hand; but I should not place them nearer than two or three feet, and would trim unmercifully from the first, or so soon as the plants were established in the ground—the

cows on the commons are my guide to this, no hedger that I have yet found has done his duty with this plant—so that I can not show you a successful hedge, but I can the errors of those who have failed; they have planted too closely, and have utterly neglected judicious trimming.

So, then, as to the Honey Locust, if we have no positive evidence in its favor, in the shape of a perfect hedge, neither have we any thing but negative evidence against it, for it can readily be shown that the failures may be explained upon well known principles—every pastured field giving us positive evidence of the character of the plant, which, if well clipped, makes an impenetrable barrier.

The unfortunate mistaking of the “Dutchman,” at the cemetery, for a John Bull, appears to be sarcastic; it was not so, *personally*, either to him or his employers; the remarks were intended to apply to the hedge, *divested* of thorns. The fault was in my eyes, that showed an exceedingly slow advance. “*Ohne hast, aber ohne rast.*”

I can not “have patience” with such a great oversight of the plain physiological facts of vegetation, especially when directed by the intelligent superintendents and directors of a great public park, who ought to be at least as well acquainted with these subjects as a common gardener—he well knows which of the buds of a shoot are most likely to grow, are possessed of the most vitality; and that while they remain in the economy all others must continue subordinate to them, even though they be wanted, by the anxious hedger, to widen the wall itself. I have no doubt “three years” will have spoiled the hedge; and every one may then see that it has failed to make a fence thick below; but I can have patience to wait still longer, and not despair for the enclosure, such is the superiority of the Maclura to the thorns, privet, etc., that it may then be cut off at the

ground, and two summers’ judicious treatment will make a perfect hedge of the right sort. I shall have patience—but should rather have seen correct principles adopted by an intelligent directory at the first, for the *light* has not been withheld, and the evidence is *in sight*. Moreover, this plan of interweaving the shoots of a hedge, is no novelty; it has been thoroughly and repeatedly tried, and, having been found wanting, it has been thrown aside, excepting for fancy and screen hedges, with particular plants—Beeches, Birches, Ostryas, etc.—that are entirely different in their habit from the Maclura.

Mr. ERNST claims that his object in the hedge at the cemetery, is to make “*a close, broad base, etc.*” To be sure this is or ought to be the object of every outside fence. But I must be allowed again to intrude the *truism* upon you—*make the foundation or base* of the wall *first*, and then add the superstructure. You can not make a hedge, as the Chinaman does his cabin, roof first; it won’t be built that way; plant-nature is against it; the air, light, rain, and dew, must have access to it all.

The result of Mr. ERNST’s practical experiments is very valuable, as confirmatory of what has already been impressed upon the reader: “Thorns lose their leaves in mid-summer,” he says, “and the young plants grow well till plashed,” etc. I have seen this hedge, and admired its pretty growth; the plashing was practiced because it was growing too heavy above, and, consequently, too open below. Plashing, however, I never did admire; it is a cruel treatment. I should rather amputate or decapitate the whole tree, and start over again. One serious objection to plashing, is the difficulty of cultivating the ground on each side, so necessary when the plants are required to make a new effort, after this rough treatment.

Another European practice, gratuitously

recommended by Mr. ERNST, on account of its furnishing air to the sides of the plants, is, in my opinion, entirely unsuited to our climate—except in low, wet lands, that need draining, to adapt them to the hedge, the ditching plan is wholly inapplicable in this country; nor does the wall, in most places, promise to be much better, although a light hedge is a very pretty ornament upon it.

We are asked whether, in our climate, we can secure low branches? I answer—yes, and no; it all depends on the course pursued. Here is the very place and the very climate where we *should* do it. Keep the ground *shaded*, by all means. Both answers are admirably illustrated in the grounds at Spring Garden—the beautiful evergreens are

perfect pyramids, the ground supporting their wide bases; the crowded and neglected Honey Locust hedge-row is just the reverse, because it has been allowed to form its own wide-spread head, to the smothering of the lower branches.

In closing this subject, I again apologize to the readers, for occupying so much space with my own hurried remarks. But the general and great oversight of simple physiological truths that should be familiar to all, needed some notice, and must be an apology for this and other attempts to familiarize our people with the simple truths of Nature, open to the observation of all, though eschewed by too many, because they are frightened with the term—*Science*!

ED.

TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY.

THE meetings of this flourishing Society have been quite interesting during the past month to the members in attendance, but do not furnish a great deal of matter to report, since much of the business transacted has been of a preparatory character for action at future meetings.

The Auditing Committee reported that they had examined the accounts of the Treasurer and Financial Secretary, and found them correct; they presented a balance sheet from the Treasurer.

The subject of modifying the Constitution has been referred to a committee, who made an elaborate report, recommending some important changes, adapting the organic law to the present and actual wants of the Society. This report was laid over for future action as directed in the present constitution.

Some of the provisions, as reported by the Committee, may be briefly noted here.

1. It is proposed that the Council shall have the entire control of the financial and busi-

ness matters of the Society, and shall make semi-annual reports, on its state and progress, at the meetings held on the last Saturdays in December and July in each year.

2. That the office of Corresponding Secretary be abolished, and that the duties in future devolve on the President and Secretary; its existence at present being rather embarrassing than useful.

3. That a Librarian be appointed to take charge of the books and library of the Society, who shall keep a written account of the books borrowed from said library by the members, and see that they are returned, and credited to such members, in conformity with the regulations of the library. The duties of the librarian are incompatible with the due performance of the duties of the Recording Secretary at present. The same person may discharge the duties of Librarian and Collector with advantage to the Society.

4. As there is no essential difference between the duties and privileges of honorary and those of corresponding members, it is

recommended that both classes be merged in one—that of honorary members.

It is sincerely hoped that the Society will adopt the modifications of the constitution that have been suggested, and that with the harmonious and zealous action of all the members, our course will enable us to maintain the high position already accorded to us among our sister societies in the United States.

Fruits have been frequently exhibited and have elicited some useful decisions, and it is hoped that the suggestions of the committee, in their report on the future conduct of the meetings, will result in the concentrating and diffusing of much valuable information, in the meetings of our members; who do not want to be annoyed with business affairs, having selected a judicious Council to dispose of all such matters.

The Wine Committee made a report on the examination had on the 29th of November.

REPORT OF THE WINE COMMITTEE.

THE Society having appointed Saturday the 29th November, for the examination of specimens of wine, J. P. Foote, Julius Brace, S. Robert, L. Reh fuss, and G. Graham, of the Committee, met on that day, and on being organized, added the following gentlemen to their body, viz: Dr. Shaler, Dr. Mosher, Mr. Adae, S. S. Jackson, and Mr. Covert.

The following rules, submitted by Mr. Graham, were adopted:

First. The bottles being numbered, shall be divided into parcels of four each—each variety to be separately examined.

Second. The Judges shall all taste from the same bottles, without knowing any private marks, or any sign which could give them a knowledge of the owner, and shall avoid expressing any opinion prior to the ballot.

Third. In pronouncing judgment, each member, without consultation with any one, shall express his opinion by writing the number of his choice upon a piece of paper as a ballot, and when all the votes are cast into a

box, they shall be read, and a majority in favor of any one number, shall be the decision for that parcel.

Fourth. The bottles thus selected shall be set aside, and shall be again brought forward for the purpose of selecting the premium bottles, which shall be such as may have a majority of the Committee in their favor.

Fifth. All the varieties of wine, of the vintages of 1849, 1850 and 1851, shall be examined and pronounced upon separately.

Sixth. Foreign wines and others, not coming within the rules of the Committee, shall be examined after the others are disposed of.

List of Wines.

It was resolved that the old Catawba wines, be first examined, and the first lot, five in number, was Catawba, 1849, with the following result of the ballotings:

		1st.	2d.	REMARKS.
No. 4,	votes, 1.	1.	1.	a fine mellow wine.
No. 16,	do 4.	3.	3.	delicate and good flavor.
No. 17,	do 1.	2.	2.	high flavor Madeira “
No. 21,	do 1.	2.	2.	light but fine.
No. 33,	do 1.	1.	1.	

On the second ballot, the numbers had been changed so that no knowledge of the previous votes could be obtained by seeing them.

The Chairman then declared that No. 16, from T. H. Yeatman, having the largest number of votes, was selected for further trial.—Nos. 17 and 21 ranked next, and all of this lot was judged to be of superior quality.

The second parcel was from bottles of the vintage of 1850.

No. 3,	votes, 0.
No. 6,	do 2, high flavor.
No. 7,	do 6, good and fine.
No. 25,	do 1.

The Chairman declared No. 7 to be selected.

The third lot consisted of three bottles, vintage 1850.

No. 28,	votes, 7; first quality.
No. 9,	do 2; good, but not equal to 28.
No. 22,	do 0; good, but not equal to 28.

No. 28 was therefore considered as selected.

The fourth lot consisted of four bottles, vintage 1850.

No. 20,	votes, 0; Cape flavor detected.
No. 18,	do 7; very delicate and good.
No. 16,*	do 0.
No. 5,	votes, 2.

No. 18 was accordingly set aside as selected.

The fifth lot consisted of three bottles, vintage 1850.

No. 1, votes, 5; good.

No. 24, do 1; flavor not agreeable to some.

No. 32, do 3; flavor not agreeable to some.

No 1 was considered as selected.

Reconsideration of the selected specimens of vintage 1850.

No. 1, 1st ballot, 2 votes; 2nd do 0 votes.

No. 7, 1st ballot, 0 votes; 2nd do 0 votes.

No. 18, 1st ballot, 3 votes; 2nd do 3 votes.

No. 28, 1st ballot, 4 votes; 2nd do 6 votes.

Whereupon No. 28, from F. Schneicke, was declared to be the best specimen exhibited of the vintage of 1850, and No. 18, from Dr. Mosher, next in quality.

The specimens of the vintage of 1851 were then examined with the following result:

First lot of four bottles.

No. 2, votes, 7.

No. 8, do 0.

No. 19, do 0; all considered too new to be

No. 31, do 0; fairly judged.

No 2 was unanimously preferred.

The second lot consisted of three bottles.

No. 23, votes, 2.

No. 26, do 0; red wine, set aside; very fine.

No. 27, do 6.

No. 27, from F. Schneicke, was preferred in this group, but not judged equal to No. 2, from G. Sleath, which receives the award among the new wines.

N. Longworth exhibited the following specimens for examination and comparison:

No. 29, old Manzanella. No. 30, Herbermont, vintage 1844. No. 34, Missouri, vintage 1844.

The first of these is a foreign wine, very superior, of its kind; the others domestic, and each of them was preferred to the foreign, by a majority of the Committee.

Currant wines, No's 10, 11, 12, 13, 14 and 15, were examined, and all dismissed with the same verdict, "too sweet."

Specimens of sparkling wines were then brought forward and examined, with the following result:

No. 41, votes, 4; very good; to some tastes the best, but

No. 42, do 7; was generally preferred—supposed by some to be foreign. Less sweet than 41.

No. 43, votes 6; very good, and also supposed by some to be foreign.

No. 44, do 3; Catawba; has a honey flavor.

No. 45, do 9; considered the best specimen presented; it was much admired.—

This is the Isabella sparkling of N. Longworth, Esq.

A communication was presented from N. Longworth, Esq., inclosing a newspaper article, giving an account of the various kinds of wine made from the Scuppernong grape of North Carolina. As those wines, however, are all manufactured with the aid of some foreign substance,—and as the wines of this region depend, for their excellence, chiefly on being kept scrupulously free from combination with any such substance, or any impurity whatever, the Committee did not consider that any valuable information to aid them in forming correct judgments would be gained from the article.

The opinion which has become general, that the Catawba is preferable to any other American wine, was strengthened by this examination. The sparkling wines are, without doubt, equal to any wines of that description from foreign countries.

One of the curious results attending this examination was that two of the competitors, those who presented Nos. 18 and 28, were not able to recognize their own wines, when presented to them, and each decided against himself, declaring that the other was better than his own. J. N. P. Foote, Chairman.

The following communication was received on the 20th, showing that the Committee misunderstood Mr. L. in regard to the Scuppernong wines:

To the Wine Committee:

From the report made by you, it would appear that my motive in sending the statement of the manner of making wine in North Carolina from the Scuppernong grape, and in sending a bottle of the wine, had been misunderstood. It is spoken of in a manner to lead to the impression, that I sent it as information that might be useful to our vine-dressers. The contrary was my object. When our grape juice requires 3 lbs. of sugar to the gallon of must, or 1 lb. of sugar and 1 qt. of brandy, to make a compound, unworthy the name of wine, I shall wish to see every grape vine

rooted from our hills. My object was to let you taste the compound, read the article, and report your views.

Respectfully, N. LONGWORTH.
Cincinnati, Dec. 16, 1851.

List of Wines Shown November 29, 1851.

No.	Variety.	Vintage.	Producers.
1	Catawba,	1850	S. Rintz.
2	Catawba,	1851	G. Sleath.
3	Isabella,	1850	C. Carpenter.
4	Catawba,	1849	J. E. Mottier.
5	Catawba,	1850	"
6	Catawba,	1850	"
7	Catawba,†	1850	T. H. Yeatman.
8	Catawba,	1851	"
9	Catawba,	1851	"
10	Currant,	1850	Mrs. Palmer.
11	Currant,	1851	"
12	Currant,	1850	Mrs. J. C. Holmes.
13	Currant,	1850	"
14	Red do,	1850	C. Carpenter.
15	White do,	1850	"
16	Catawba,	1849	T. H. Yeatman.
16*	Catawba, cask,	1851	"
17	Catawba,‡	1849	S. Mosher.
18	Catawba,	1850	"
19	Catawba,	1851	R. Buchanan.
20	Cape,	1850	"
21	Catawba,	1849	"
22	Catawba,	1850	"
23	Catawba,	1851	A. Smith.
24	Catawba,	1850	"
25	Catawba,	1850	G. Sleath.
26	{Cigar box and Herbemont,	1851	F. Schneicke.
27	Catawba,	1851	"
28	Catawba,	1850	"
29	Manzanella,	v old	N. Longworth.
30	Herbemont,	1844	"
31	Catawba,	1851	"
32	Catawba,	1850	"
33	Catawba,	1849	"
34	Missouri,	1845	"
35	Scuppernong,	—	"
36	Herbemont,	1844	"
41	Spark'g Cataw,	1849	"
42	do do	1850	"
43	Heidsieck,	—	best brand. —
44	Spark'g Cataw,	1848	Bogen.
45	Isabella,	1850	N. Longworth.

† Bottled.

‡ Bottled last March.

HOW TO DESTROY ANTS.

THE following method of destroying ants and caterpillars, though old, is but little known, and very successful and simple:

It consists in scattering spirits of turpentine over the places where the insects are, by means of a brush struck against the hand, so as to cause the turpentine to fall out like rain. If the ants are in a pot, they will all leave, if a little turpentine be applied, so as to form a circle round it. Soap and water has been long a famous remedy against caterpillars; but Mr. Manelle, to whom we are indebted for this article, finds that soap-lather is much more efficient. A wet brush rubbed on a piece of soap, produces, as is well known, a great quantity of lather; and if this be applied to the parts attacked by caterpillars, they are instantly destroyed. If the caterpillars can not be reached with the hand, the soap may be applied to them with a horse-hair brush, on a long handle. The morning and evening, when the caterpillars are collected together, are the best times for performing this operation.

Flore des Serras and Jardin.

THE USE OF FRUIT.—Instead of standing in any fear of a generous consumption of ripe fruits, we regard them as positively conducive to health. The very maladies commonly assumed to have their origin in the free use of apples, peaches, cherries, melons, and wild berries, have been quite as prevalent, if not equally destructive, in seasons of scarcity.—There are so many erroneous notions entertained of the bad effects of fruit, that it is quite time a counteracting impression should be promulgated, having its foundation in common sense and based on the common observation of the intelligent. We have no patience in reading the endless rules to be observed in this particular department of physical comfort. No one, we imagine, ever lived longer or freer from the paroxysms of disease, by discarding the delicious fruits of the land in which he finds a home. On the contrary, they are necessary to the preservation of health, and are therefore caused to make their appearance at the very time when the condition of the body, operated upon by the deteriorating causes not always understood, requires their greatful renovating influences.—*Boston Med. and. Surg Journal.*

THE AMERICAN WINE GROWERS' ASSOCIATION.

HELD their regular monthly meeting on Saturday, December 6th, 1851. Dr. Mosher in the Chair. The minutes were read and approved.

The statistics of vineyards was the subject of inquiry and report. In connection with the order of the day, the report of the Committee on Vineyards. The Committee were granted further time to complete their report.

The subject of the wine scale was discussed, and especially that made by Mr. Bennet, referred to at the meeting last July, upon which some interesting remarks were made as to a suitable standard. The Secretary was requested to investigate the matter and report to next meeting whether Mr. Bennet had prepared an instrument for our Society, as suggested at a previous meeting.

The members were reminded that the next meeting, on the first Saturday of next month, would be election day. Adjourned.

J. A. WARDEB, Sec'y.

The following communication was read, and ordered to be engrossed upon the minutes as a valuable contribution to the history of the *Catawba Grape*:

Further History of the Catawba Grape.

My article on the history of the Catawba Grape, published in the first number of the *Western Horticultural Review*, has elicited a lengthy communication from Col. William Murray, of Catoosa Springs, Walker county, Georgia, a brother of the Murray therein alluded to, which fully corroborates the statements there made by Dr. Beach, and now finally settles the question in regard to the origin of this grape. From this communication of Col. Murray, it appears that his father emigrated from Pennsylvania and settled in the woods on the old Kentucky and Warm Spring trail, as early as 1801. At that time there were no roads in that country. The farm then settled, and afterwards called Murraysville, is now about ten miles southeast of Ashville, in Buncombe county, North Carolina, and embraces the forks in the roads, correctly described by Dr. Beach, the locality, as well as the character of the country, it being nearly on the summit level of the Black Ridge, in latitude 35 deg. 30

min., mountainous, thinly timbered, soil poor with many loose stones and gravel.

At that place, in 1802, Col. Murray says these grapes were found growing in great abundance; also another variety with very long bunches, crowded and of a dark purple color, but not so delicious as the first which grew in more open clusters, were larger and of a more reddish color. After the trees were cut down which shaded them, he says they were better and grew larger, and have very much improved by cultivation since, and are at this time considered the best grapes in the country.

In 1803 Commissioners met at Murraysville to settle a question of disputed boundary between North Carolina and Georgia. On this occasion these grapes were tested and pronounced good. In 1805 he states that the Friends or Quakers from Newbury District, South Carolina, emigrated to Ohio, and as they passed through this place took these grapes with them. It would be interesting to learn where they settled in Ohio, and whether they ever succeeded in propagating them there.

In 1807, Gen. Davy, a Senator in Congress, then living at Rocky Mount, on the Catawba river, in the bounds of the Catawba Nation of Indians, transplanted some of these grapes to his residence, and sometime between the years 1807 and 1816 he took some of them with him to the city of Washington—gave them the name of the Catawba grape, and disseminated them among his friends in Maryland. From this source it is probable they fell into the possession of Mrs. Schell, from whom Maj. Adlum obtained them, and made wine of them in 1822. In 1825 he sent the vines with some of the wine to Mr. Longworth, of Cincinnati.

To Maj. John Adlum, then, of Georgetown, District of Columbia, are we indebted for its discovery and early reputation as a wine grape, and to N. Longworth, Esq., of Cincinnati, for its introduction in the West, and for the impetus given to its cultivation and the fabrication of wine, which bids fair soon to become an important staple of our country, and to supplant many foreign wines in our market.

For pure, dry, and sparkling wines, the Catawba grape is likely to become to the valley of the Ohio what that celebrated grape, which yields the best Hock wines, those of Johannisberg and Steinberg, are to the Rhine, which grape, it is said, was introduced into that country from Orleans, in France, by Charlemagne.

It may seem to be a matter of minor consideration to be thus particular in endeavoring to trace the origin of a particular variety of the vine. But, as thus far it stands without a rival in America in yielding a pure, dry wine, it is a matter of paramount interest and importance to become acquainted with its nature, locality or habits, especially with a view to understand its nature, habits, and proper cultivation.

From the experience we have had in cultivation, it appears that the soil and situation best adapted to its healthy and productive growth, is that which approximates most nearly to its native elements. On the sides and tops of dry stony hills, where the soil is loose and porous, it seems perfectly at home, and is little subject to rot or other diseases—the greater the departure from these, its native elements, the more uncertain its culture and perfection of fruit.

In rich alluvial bottoms the growth is rank and luxuriant, but the fruit is liable to rot and the vines in a few years to decay and become unproductive—clayey uplands retentive of moisture are equally uncongenial. In choosing a location for a vineyard, therefore, these points are of much importance, and should be well studied. In the organization and allotment of vegetables, it is a well known principle of economy, that every species and every individual variety of plants have been placed and adapted by nature to a particular soil and atmospheric condition, and very many will not bear a change with impunity. Scientific cultivators are not so well acquainted with these facts, that in transplanting their chief endeavors are to reduce the condition of things as nearly as possible to their primary elements. The vines of Europe, for instance, will not succeed in the climate of America when exposed to the variable changes of our atmosphere—hence our intelligent horticulturists are erecting their crystal vineries to shield them from these changes, and to restore to them artificially a climate more in accordance with that of their native home.

S. MOSHER.

THE LOVE OF FLOWERS.

A FAIR correspondent in the country has allowed me the privilege of using a portion of her letter upon flowers. I thank her for it; and hope to be favored again by herself, and by others equally well disposed to contribute to the Review.

ED.

DR. WARDER:

* * * * *

It would afford me the greatest pleasure to contribute aught, to your *very valuable work*, did I consider myself competent to do so. I have never attempted to *write*; but I often find that *others* have embodied the innermost breathings of my soul, in language more eloquent than my feeble pen could ever portray them. How adorable is the gift, to be able to transfer our thoughts in unchanged

eloquence, from the inarticulate world of reverie, to the language in which others can share them! I do homage to it in others—though not blessed with such a divine gift myself.

I have had very little practical knowledge in any of the branches pertaining to agriculture, it has not been for the want of a will, but opportunity, as we have been moving about from year to year; but have finally purchased a little lot of about three acres, upon which we expect to form a second little "Garden of Eden."

We value your work highly, as it always contains information in regard to the culture of *green-house plants*, as well as all others. I judge from your selection of the piece—"A Flower in your Room"—that we shall

agree in our views upon flowers. I have ever been an enthusiast about flowers and "painting!" Are they not two of the greatest of Heaven's blessings!—a taste for the beauties of nature, and the skill to copy these beauties on canvass? Flowers! of all created things, are the most innocently simple, and most superbly complex—playthings of childhood, ornaments of the grave, and companions of the cold corpse! Flowers!—beloved by the idiot, and studied by the man of *science*!—the most exquisitely beautiful of all the wonderful works of God; they can of the deepest solitude, make a little paradise. Who would resign the modest dwelling, surrounded by fragrant shrubs and plants, or even the tiny cottage, encircled by *woodbine* and *jasmin*, for the tumults and anxiety of the most enviable promotion? After all our ambition, and all our struggles, it is chiefly in the shade that the *mind* finds contentment. The pleasures *there* are calm, they are pleasures of the heart. What is more renovating, among the every-day cares of life, than daily to observe the gradual progress, health, and vegetation of our plants, trees, and flowers! It soothes the soul to harmony, and cherishes all the more gentle emotions.

Flowers are in the volume of nature, what the expression, "God is love," is in the volume of revelation. What a desolate place, would be a world without a flower! It would be a face without a smile, a feast without a welcome. Are not flowers the stars of the earth? and are not our stars the flowers of Heaven? One can not look closely at the structure of a flower without loving it. There is a simplicity of design and effect in the smallest flower that grows, as well as in the stately magnificence of the "rude old oak!" How cheerful, and animated, are the meditations of a morning, in the balmy month of May, while viewing the new-born scenery of

nature! What an unspeakable delight glides into the soul, and pervades our whole existence, while surrounded by the essence and perfume of *beauty—flowers*! In their contemplation, and cultivation, there is derived a sweeter music for the heart, and a more innocent, sparkling brilliancy imparted to the eyes, than any of the most admired frequenters of gay assemblies can ever boast of.

Attention to a garden is a truly feminine amusement, and if we mix with it a taste for botany, and a knowledge of plants and flowers, we shall never be in want of a restorative. Our first parents are described by Milton, as tending the shrubs and flowers of their paradise with increasing delight and assiduity, and as rising with the dawn to work—

"Amongst sweet dewes and flowers, where any row
Of fruit-trees, over woody, reached too far
Their pampered boughs, and needed hands to check
Fruitless embraces; or they led the vine
To wed her elm———."

There is an inexpressible tranquillity in a garden, which soothes the spirits. Our Saviour often resorted to a garden. Innocence and purity found it the happiest place for meditation and repose. It is impossible, indeed, to have a richer blessing than a taste for the general beauties of nature. It is a deep fund of pleasure, within every person's reach; it purifies and refines the mind, and raises it above the artificial gayeties which are purchased at so great an expense of time, money, and often of health! Did we think so, we might, indeed, "live with the angels that visit us on every sunbeam, and sit with the faries who wait upon every flower!"—Yes, methinks, were I an "Editor," I would have a little nook in a secluded spot of my garden, surrounded by *myrtle*, and *cypress vines*, which, as my "sanctum," should be devoted to meditation, and held sacred from all *intrusion*—even that of the "——" calling for copy, not excepted.

MARY E.

NOTES ON CLIMBING PLANTS FOR THE GREENHOUSE.

BY HORTUS.

CLIMBING plants are most useful adjuncts in decorating greenhouses; and, where grape vines are not introduced under the rafters, they add much to the beauty of the house, hanging in graceful festoons from the roof, and are rather beneficial than otherwise, in breaking the direct rays of the sun from the plants on the stage, if kept in due bounds, and not allowed to form a dense mass of foliage under the whole surface of the glass. In span-roofed houses, a series of semi-circular arches, running along the top of the house, covered with flowering climbers, have a fine effect; and single, long-roofed houses are much improved in appearance by similar arches, springing from upright pillars, placed about the middle of the rafter, stretching to the back wall, adding strength to the structure, and breaking the uniform sameness in houses of this description. These climbers may be planted inside the house, in borders prepared for their reception; or some of the hardier kinds planted outside, and introduced through openings in the wall.

Should it happen, however, from the internal arrangement and construction of the house, that these methods can not be adopted, the plants will flourish as well in pots or tubs, proportionate to their size and habit of growth. Indeed, many persons prefer this mode, rather than planting them out permanently, especially with delicate rooting plants, as they can be better attended to, and are more under control, than when allowed unlimited space. Moreover, when they are planted out permanently, and have filled their allotted space, the house becomes, as it were, stereotyped in appearance, and uninteresting to the frequent visitor, which is not the case when placed in movable pots, as these can be changed when requisite, and admit of fresh and more ornamental additions and arrangement. Where large pots are objectionable on the stage, they can be placed out of sight under a shelf, or other convenient situation, and the plant trained to the desired location.

In general, they should not be too rigorously tied or trained, as these ramblers of the jungle dislike formality, and show to best advantage when allowed to assume a natural

irregularity of growth. On the other hand, it is necessary to guard against confusion, and prevent them from getting into entangled and inseparable masses. In most cases, the leading shoots only require securing and training, allowing the lateral branches to assume their natural position. Whatever position they are intended to occupy, they should be trained to it at once, as it is difficult to alter them afterwards, without injuring the foliage.—The less robust growers should be trained to trellises attached to the pots. These may be of any shape to suit fancy. Cylinder and globular forms answer better than flat or shield shapes. The pyramidal outline is more pleasing than either, and admits of better arrangement with other plants on the stage. The following are very brief remarks upon a few good plants, that will suit the temperature of a greenhouse:

Plants Adapted for Training on Pillars, Back-Walls, &c.

Mandevilla sauroiens.—This is a fine-foliaged, free-growing plant, bearing beautiful white sweet-scented flowers, and is not grown so generally as it deserves. Potted in good loamy soil, with plenty of pot room, it grows fast, and flowers abundantly. During winter it will require very little water: propagates easily by cuttings.

Ipomæas.—There are a great many varieties of these, all pretty. *I. Learii* and *I. Horsfallæ* have splendid flowers. The latter is frequently treated as a stove plant, but succeeds well in the greenhouse. They require a light, rich soil; pots well drained, so that water will pass quickly through the soil. This is necessary, as the roots are very susceptible of damp during winter. Easily raised from seeds, or extended by cuttings.

Stephanòtus floribunda.—This is a beautiful evergreen, with fine dark green foliage, forming a fine contrast with the clusters of white flowers, of exquisite fragrance. Unfortunately it is a little tender, but has been grown to great perfection in greenhouses, by watering sparingly and carefully in cold weather. In summer it luxuriates in moisture. The soil should be turfy loam, mixed

with sand and charcoal, and the pots, of course, particularly well drained. It is propagated by cuttings.

Bignonias.—These are very rampant growers, and do not succeed well unless the roots are allowed plenty of room. *B. venusta* and *B. Lindleyi* are of more moderate growth. They should be planted in good loamy soil, and pruned back annually, when deciduous. Many of the species are hardy, and all easily raised from seeds or cuttings.

Passifloras.—These are common and much admired. *P. alata* is of a strong growth, and will speedily cover a large space, especially if it gets near to the top of the house, where it will receive more warmth. *P. racemosa*, *P. cærulea*, *P. Cermesina*, and *P. Loudonii*, are also good sorts. They answer well to plant in a prepared border, in a well-drained loamy soil.

Allamanda cathartica—is a beautiful plant, of recent introduction. It should be planted in good open soil, properly drained. It is of vigorous growth, requiring plenty of moisture in summer; but, being a native of South America, requires careful treatment during winter. By keeping it near the warmest part of the house, and watering sparingly, it will succeed well.

Stigmaphyllon ciliatum.—A slender growing and rather elegant climber, with yellow flowers, formed in clusters, and produced plentifully towards autumn. The roots are somewhat fleshy, and should be kept nearly dry during winter; but likes plenty of moisture at roots, and syringing overhead, while growing.

Cobaea scandens, *Maurandia Barclayana*, (varieties, purple, white, and rose-colored,) and *Lophospermums*, *scandens*, *Hendersoni*, etc., are all pretty, and of the easiest culture. Raised from seeds sown in spring, they will attain a large size, and flower profusely all summer, in any light, rich soil.

Eccremocarpus scabra also forms a handsome object; it grows very quickly, and flowers all summer. It can be raised annually from seeds; or cuttings, rooted in fall, will keep during winter.

Plants Adapted for Pot Trellises.

Manettia bicolor.—This is a fine orange and scarlet flowering climber. Cuttings, rooted in early spring, grown in the greenhouse all summer, and placed in flowering

pots about the end of July, will form good sized plants before winter. It must be kept at the warmest part of the house.

Sollyas are pretty blue-flowering plants, of easy culture; cuttings roots readily. *S. heterophylla* and *angustifolia* are good species. Light, sandy soil suits them well.

Schubertia graneolens.—A very fine, new plant; flowers white, produced in clusters, deliciously fragrant, and stands a long time in bloom; requires to be kept rather warm, and free from cold draughts. Soil should be well supplied with porous materials, and watered sparingly when done flowering.

Kennedias.—These require a lightish soil, well drained. There are many varieties of color. Some of the more distinct are, *K. inophylla*, purple; *K. prostrata*, red; *K. Marryattæ*, scarlet; and *K. nigracans*, yellow and purple. They luxuriate in a moist atmosphere. Seeds are plentifully produced, and can be increased by these, or cuttings.

Gompholobiums.—*G. polymorphum*, *versicolor*, and *venustum*, are desirable climbers. They should be kept from currents of cold air. Soil, sandy loam.

Hardenbergias.—*H. macrophylla*, and *H. monophylla*. These require a light, sandy soil. After they bloom, they can be placed out of doors, to harden and ripen the young shoots. When taken into the house, the old soil should be shaken from the roots; both tops and roots should be pruned back, the plant potted in fresh soil, and placed in shaded situation.

Brachysema latifolia, *Buddlea Madagascariensis*, and *Physianthus abus*,—scarlet, yellow, and white. The former should be kept in the warmest part. *Buddlea*, rather coarse growing, but flowers well when the roots are confined in a small pot. The last must be kept short of water in cold weather.

Tropæolums.—This is an extensive and lovely genus, comprising flowers of different colors, and flowering principally in winter and spring. Those that form tuberous roots should be potted as soon as they commence growing, watering sparingly, until they gain strength of foliage. When the flowering season is over, they should be kept dry until the stems decay, then shaken altogether out of the soil, and placed in an airy, dry situation, until they again begin to push fresh shoots. *Lobbianum* is a handsome species; cuttings of this, struck in spring, will make

fine plants for flowering in October and following months. Particular care is requisite in having the soil for these of a fibry nature, and the pots thoroughly drained.

November, 1851.

The above excellent article, on climbing plants, is one of the most interesting we have published from our correspondent.—Nothing adds so much to the appearance of a house, as a few climbing plants; and especially in our sunny climate, where shade is

actually essential part of the year, it is surprising that so few of these are generally grown. It is a mistaken idea that they will injure the plants, if they are kept duly pruned and tied up to the trellis. On this head, the remarks of Hortus are to the point; and if they are carefully followed, whether the plants are in pots or in the border,—whether trained up the rafter, or to trellises,—they will be the most attractive objects of the conservatory.

Hovey's Magazine.

PLANTING.

THE ordinary mode of planting the various kinds of shrubs which ornament our villas, is apparently so simple and so easy, that it scarcely calls forth a remark. To dig holes and thrust plants into them is considered to require no great amount of knowledge or skill. Trenching is deemed useless and unnecessary, because it is believed by the inexperienced that plants will thrive alike under all conditions, *i. e.*, if the soil be good; and if it happens to be indifferent, why, of course, there then exists a substantial reason for their looking stunted, scrubby and sickly. Any amelioration of its natural unkindliness is never thought of; but if it were, it would be looked upon as a wild theory propounded by some speculative mind. A case in point occurred the other day, when I was called in by the owner of a small villa residence to inspect the place and give my opinion as to the reason why the shrubbery looked unlike that of his neighbor, both having been planted at the same period. The shrubs in the one I examined had made comparatively little progress. They were yellow and stunted, and with the exception of two weeping willows. On trying the soil, I found that six inches below the surface there was a retentive clay which had not been trenched in planting, beyond a little scooping out where the plants had been inserted. They were thus placed in a clay basin, filled three parts of the year with wet puddle; the roots which were made in summer perished of course in winter. Now it will scarcely be believed that the ground work of seventy per cent. of all the villa residences of our great towns is simi-

larly "laid out." Contracts are entered into, and a polish given to the surface. Shrubs and trees from the nursery, full of health, adorn the borders when the work is done, never more to assume a similar aspect; for as my friend remarked, nothing could look healthier than the plants did when they were first set out. His gardener, a bright sample of the class employed at such residences, insisted that the soil of the place was the very worst in the locality—that nothing would even make shrubs grow in it—that making any attempt at this would only be wasting labor; so that he found there was no help for him but to live in the midst of plants, struggling between life and death, diseased yet still tenacious of life. In this dilemma my recommendations were favorably received by the proprietor, but strongly resisted as being absurd by the gardener. The first step was to entirely clear the whole ground, then to form secure drains eighteen feet apart, and three feet deep; and as road scrapings were abundant in the neighborhood, to cover the whole two or three inches thick with them. Then to trench the ground two feet deep, well incorporating the road scrapings with surface soil and clay, and then to replace the shrubs, taking care, however, that the roots were not crammed into the smallest possible compass, but regularly spread out to their extreme lengths, and the soil properly distributed among the fibers—in fact planted, but not according to the vulgar notion of doing this. Before commencing operations, however, I advised him to employ a competent person who understood what planting meant,

and who would carry out the work in the appropriate spirit. I further assured him, that by following these simple recommendations, his shrubs would grow as well and kindly as any in his neighborhood, but that everything depended upon how the instructions were executed. PHARO.
Gardeners' Chronicle.

NEW AND REMARKABLE PEACH.—Mr Samuel Redfield, of Randolph, Portage county, exhibited several peaches at the Ohio State Fair, which he states were produced from a seedling tree which possesses the remarkable quality of commencing to ripen its fruit about

the middle of August, and continues ripening in succession till the last of September. The fruit is quite large, of a cling-stone variety, of handsome appearance, and good flavor, with rather a large stone.

“Scientific farming” is the ascertaining of what substances the plants you wish to raise are made, which of these substances are wanting in your land, and what manures will supply them.

~~As~~ WEEDS exhaust the strength of the ground and if suffered to grow, may be called garden sins.

METEOROLOGICAL TABLE.

CINCINNATI, NOVEMBER, 1851.

THERMOMETER.			WEATHER.			RAIN.	SNOW.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.		
1	48	73	clear	clear	rain	.45	
2	49	53	cloudy	cloudy	cloudy		
3	40	48	var	clear	do		
4	32	48	clear	cloudy	do		
5	40	40	fog, var	do	do		
6	30	40	clear	clear	clear		
7	20	57	do	do	do		
8	35	45	do	var	cloudy		
9	37	42	rain	rain	drizzle	.75	
10	36	40	cloudy	cloudy	cloudy		
11	32	48	clear	clear	do		
12	41	47	cloudy	rain	drizzle	.10	
13	51	60	do	drizzle	cloudy	.05	
14	57	60	do	do	drizzle	.10	
15	44	45	do	cloudy	cloudy		
16	40	51	var	do	clear		
17	35	45	clear	clear	do		
18	34	46	do	do	do		
19	30	50	fog, clear	do	var		
20	42	51	drizzle	rain	do	.30	
21	35	36	cloudy	cloudy	clear		
22	31	41	do	clear	do		
23	38	44	do	cloudy	cloudy		
24	37	42	fog, clear	var	do		
25	31	33	snow	snow	do		3.90
26	32	42	var	clear	clear		
27	32	41	do	drizzle	cloudy	.05	
28	37	40	clear	clear	clear		
29	29	46	do	do	do		
30	39	46	cloudy	var	do		
Total.....Inches, 1.80						3.90	
Rain and melted snow, ....Inches, 2.25							
Mean temperature of the month.....41.90°							
Do	do	Nov.	1850.....	48.22			
Do	do	do	1849.....	51.83			
Do	do	do	1848.....	39.76			
Do	do	do	1847.....	47.60			
Do	do	do	1846.....	47.14			
Do	do	do	1845.....	44.87			
Mean of the above 7 months.....						45.75	

Clear days in the month.....	6
Variable, sun at times.....	15
Cloudy, sun not visible.....	9
	30

REMARKS, WINDS, ETC.

1 Calm, light S.
2 Light N. W. & W.
3 Light N. W.
4 Light W.
5 Light N. W., drizzle mixed with snow.
6 Light W. calm at night.
7 Light S. W.
8 Light S.
9 Calm light S. W.
10 Calm light N.
11 Light N. brisk N. E.
12 Light N. E. & E.
13 Light S. E. & S.
14 Light S. W.
15 Light N. W. & W.
16 Light S. W., calm at eve.
17 Light W.
18 Light W., calm at eve.
19 Calm light S. E.
20 Calm light N. E. S. & S. W., high at night.
21 Brisk W., snowed a few minutes.
22 Light W. & S. W.
23 Light S. E., calm light N. E.
24 Light N.
25 Light N. calm
26 Light S., snow melted.
27 Light S. E.
28 Brisk W.
29 Light S.
30 Calm light N.

There has not been one-half the usual number of clear days in this month; and we have experienced the very rare occurrence of four cloudy days in succession. The mean temperature of the month is near four degrees below the mean of November for the last seven years. There were as many cloudy (sunless) days in this month as in the seven preceding ones.

JOHN LEA.

UNIV. OF
CALIFORNIA



Birth Place of Henry Clay.



Vol. II.

FEBRUARY, 1852.

No. 5.

HORTICULTURAL GARDENS.

Why have we no public gardens in this country, is a question often asked, but not easily answered. We have one standing excuse for all our deficiencies, we are a new country; our society is in its forming or crystallizing state, still unformed, and the establishment of public institutions must not be expected among the pioneers. But is it not time that we should begin to realize the development of our character? Some of us think that we are approaching the terminus of our minority, and should begin to put on the habiliments of mature life—should have now become more staid and settled than we could have been in our junior condition.

A move of this kind was made in the Cincinnati Horticultural Society a few years ago, and some advances were made toward the establishment of a *Horticultural Garden* in this neighborhood, but after a long discussion of the *pros* and *cons*, it was considered best to relinquish the undertaking as not calculated to advance the interests of Horticulture so much as to compensate for the interference it was supposed it would exert upon the extended interests of a highly valued and meritorious class of our society—the practical business gardeners—at least, they manifested a jealousy of such an institution, and the good taste of the others pre-

vailed, so that the enterprise was allowed to fail, and it is doubted whether it will ever be revived here unless it should be under entirely different auspices, such as a bequest with a liberal endowment, so as to place it entirely beyond the condition of a competitor, with the hard working and meritorious gardeners already in the field, and who have to contend with a sufficient competition with one another, and with existing institutions, to secure a healthy state of the market, guarantee an abundant supply and easy prices to the community.

The flourishing Horticultural Society of Columbus, however, find themselves surrounded by different circumstances, and have struck out boldly in an undertaking of this kind, as will appear from the following account of their doings which has been furnished by Mr. Comstock, one of their most energetic and efficient members.

The Columbus Horticultural Society's Garden.

At the regular weekly meeting of the Society, May 24, 1851, Mr. Benj. Blake offered a resolution that a committee of five should be appointed to examine into the expediency of establishing a Society Garden, and if deemed expedient, to report a plan of operations. This resolution was unanimously

adopted, and Messrs. B. Blake, Jno. Miller, Adam Sites, George Comstock and H. C. Noble were appointed said committee.

At the next meeting of the Society, May 31, this committee reported. Their report was chiefly confined to the expediency of establishing a Garden—the advantages in having sufficiently extensive and proper grounds for Horticultural experiments, and a Gardener to be constantly engaged. They also allude to the very limited opportunity which most private persons have to conduct such experiments successfully. But in connection with these views it is necessary to consider the best situation and mode of conducting such a Garden. The Committee then discussed these various points, but owing to the variation which any particular state of facts would make in these calculations, they, in conclusion, recommended that a committee of five be appointed to look around for a suitable location for a Garden, of ten or fifteen acres—that they should invite proposals from owners of land suited for the purpose—should present an estimate of the cost for improvements, a Gardener, etc., and should collect such other reliable information and statistics as could be obtained, regarding such an enterprise elsewhere, and report the result to the Society.

In accordance with these suggestions the same committee was continued, with instructions to report upon these subjects four weeks from the time of the first report. Owing to other matters occupying the attention of the Society this second report was not received until the evening of July 5th, at which time the following report was read :

The committee on the Garden, respectfully report —

That after the meeting referred to, when it became known that the Society entertained serious intentions of procuring a Garden, a great deal of interest was manifested and

encouragement given by our citizens. Most of them seemed to think it a most favorable time to commence this enterprise—a time when our city has reached a size and degree of wealth sufficient to support it, and when the most urgent necessity is felt for some place of pleasant resort,—a time, also, when Horticulture is making the most rapid advance, under the guidance of Hovey, Downing, Thomas, Barry, Kirtland, and a host of others.

Your committee have also found the time most favorable for procuring a site. There are many projects for suburban improvements. Persons so interested, are desirous that a Garden, such as we contemplate, should be established in their vicinity. And we have received proposals from several persons owning property in the vicinity; in the preference, we must be guided by what we deem the best interest of the Society.

The report then describes the pieces of land, and the terms offered by the following gentlemen:—Messrs. H. C. Noble, S. McClelland, S. Galloway, Wm. Neil, Chas. Eaton, and Samuel Barr.

The committee may be expected to express their opinion of the various pieces of land. They do not, however, think it proper to go into detail, nor to criticise the lands thus offered; but express their decided preference for those offered by Samuel Barr.

First. In regard to the nature and quality of the land itself.

This piece of land comprises ten acres, in nearly a square shape. It lies on the second bank of Alum creek, about two miles from High street. The bank rises 15 or 20 feet above the table-land below, and is somewhat broken into points and valleys. The land lies partly on the bank, and partly in the plain. That on the bank is covered with forest trees, of every variety and size. The sugar tree, oak, white and black walnut, and

mulberry, with an undergrowth of the papaw, furnish a beautiful shade, and indicate a deep and fertile soil. The plain below is a rich alluvium, susceptible of the highest degree of cultivation. The Alum creek valley is one of great fertility, and in a high state of improvement. It stretches off to the north-east and south-east, with the meandering of the river, while this bank projects into this pleasant valley, and from all points furnishes an extensive and beautiful landscape.

This ground, owing to its elevated and varied character, and the fine growth of trees, is susceptible of the finest effect for landscape gardening, and is capable of producing the best fruits and vegetables, while the shade afforded will ever make it a desirable and pleasant resort in summer. It needs only a spring or running stream to render it all that is desired; but this is a feature which none of the lands have, nor can it be very easily obtained in this vicinity.

Second. In regard to its accessibility.

This ground is south of the Granville plank road, about two miles from High street. It is about forty rods from the road, on a street to be opened to it in the new village of Eastwood. This street, we understand, will eventually be extended to the National Road. There are no railroads or bridges to cross in getting to it. The plank road is nearly done, and we are assured that the company will put the toll at one cent per mile, and will finish the side road with gravel, during the year 1852. There are, however, three other roads leading from the city eastward, by which it can be reached; and this variety of roads furnish an agreeable change in the drive. This, with the central location of the grounds, will give more satisfaction than any selection in another quarter. Instead of the land costing us anything, we receive \$180 with the land. This is a most

generous offer, and none, certainly, can cavil at the terms, for all that is required by the donor is, that we shall, in good faith, undertake and prosecute our enterprise for five years, when the land becomes the absolute property of the Society. As it is our object thus to establish a Garden, certainly this condition can not be objected to. We therefore most cordially recommend the Society to accept this offer, and enter at once upon its improvement.

Upon the other questions referred to the committee, their information is not so full as desired. They have received but little authentic information on the subject of similar enterprises elsewhere. Such gardens have been established, both in England and in France, and it may be in other continental States. Besides the garden of the London Horticultural Society, there are some Botanical Gardens in other cities of England. We do not know with what success these are managed. We believe that the "*Jardin des Plantes*," of Paris, is one of the largest and finest gardens in the world, and is carried on very successfully in a financial point of view. So far as we have learned there is no such garden at this time in the United States. There are many very fine private gardens, and there are many prosperous Horticultural Societies, but we have not heard of any Horticultural Society that has a garden established. The matter has been proposed at Cincinnati, but has not been carried out; and we believe that the Massachusetts Horticultural Society, at Boston, was once connected with Mt. Auburn, but did not use it as a garden. By the last report of the Pomological Congress of the United States, held at Cincinnati, we learn that a similar enterprise was proposed and referred to a committee, and that this committee reported, 'that it was expedient to enter upon the enterprise of establishing an American Pomo-

logical and Botanical garden, and to carry it out. The spirit of the age favors the project and this Congress needs only a northern, a southern, an eastern and a western establishment of the kind to become one of the most important and most useful bodies of the promoters of the pleasure and profit of mankind.' The committee asked time until the next meeting (to be held in Philadelphia this fall) to report further.

But had we not this high concurrent authority, it is sufficient evidence of the feasibility of this plan and the probability of its success to know how general was the sentiment in its favor among our members before it found expression by resolution, and how warmly it has been supported, and how successfully it has been carried toward its realization. If there be no other let us set the worthy example of establishing a garden in connection with our Society, where all the disciples of Horticulture shall unite their labors to promote her cause and add to the elevation and happiness of the community in which we live.

With regard to any estimate of the expense, the committee would say that they have made no very strict inquiry, but think they can give a very correct estimate of about the amount necessary to start.

The land will cost nothing.

The fencing will cost from	\$250 to \$500
For houses, stabling, etc., of plank	800
For gravel walks	150
Horse, cart and implements	150

Whole am't of improvements \$1850 to \$1600.

To this must be added the cost of labor.

We learn that a good practical garden- er can be had, furnishing all the im- plements and a house, for	\$300
Assistance for a year, about	300
	<hr/> \$600

It will thus be seen that about two thousand dollars is all that is necessary to estab-

lish a garden. Of this, about \$1500 is for permanent improvements, the rest for labor. The cost of this labor if properly managed, can be partly paid by the sale of articles the first year; all, or nearly all, the second, and after that the garden will pay all its expenses. This is our estimate. It may be incorrect, but we give it as some sort of guide to direct us in our investigations. If this be an approximation to the true expense, our Society, and those who are willing to join us in this enterprise have but to raise a small amount of money (in proportion to the size and wealth of our city) to secure what will become one of the most beautiful and attractive features of our city. It will be the realization of a most pleasing and beautiful idea—one that will tend as much to elevate the taste and character of our people as any single effort we can make.

In point of utility we know of nothing by which the citizens will reap a more abundant reward than this. Our fruits will be improved—our markets better supplied with every luxury, and the whole country will gradually be supplied with the products of this garden until it will be far in advance of any other in the State.

With these considerations we submit our report, and hope all will gladly accede to this proposal, and that the Society will enter upon this enterprise at once.

This report was read at the meeting of July 5th, and the proposition of Mr. Barr unanimously accepted. A committee was appointed to receive the conveyance of the land, and another to raise a subscription to improve the grounds.

Thus stands this enterprise, and it now remains with the citizens of Columbus to say what shall be the character of this garden—for a garden we will have. Shall it be one which will afford us not only a place of pleasant and profitable resort, where we may

enjoy the fresh air and beauty of the country, become active participants in the benefits to be derived from the garden, and to which we may proudly conduct our friends or strangers from abroad? Or shall it pursue its less ostentatious but not less useful course of being

the private enterprise of the Horticultural Society alone?

All are invited to contribute, and we hope it will be done. We learn that nearly one-half the sum to secure a successful commencement is secured.

THE CRICKET.

"And Crickets sing at the oven's mouth,
All the blither for the drouth."—SHAKESPEARE.

AN eminent French Entomologist, Reaumur, has very justly observed, that "it is certainly no fault of Nature's if we do not possess works upon insects which *everybody* may read with pleasure". His most amusing though rather voluminous publication, "Memoires pour servir a l'Histoire des Insectes," 1734, went far to supply, in his time the deficiency at which he hints, and in ours, amidst the multitude of familiar books on every subject, it might certainly be supposed that there is no lack of such on this topic as would suit and please everybody.

No inquisitive mind need complain of any want of keys for the simple opening of that drawer in Nature's cabinet (a drawer of gems) which has been labeled "Entomology." Of these there are an abundance--gilded keys of popular, as well as iron keys of scientific manufacture, but the still prevailing want is an incitement to place them in the lock. The works of Kirby and Spence, Rennie and Jardine, Burmeister and Westwood, may be said to furnish, pre-eminently, the gilded, or, with reference to their intrinsic worth, the *golden* keys in question; but seeing how generally even these are left to tarnish on the shelf, something would seem to be required as an incentive to their more frequent handling.

The most prevalent feeling about insects, except perhaps the "busy people" of the hive or the "painted populace" of the garden, is that of indifference, if not distaste; and who of the multitude thus ignorantly prepossessed, would seek for books strictly devoted to their history, or believe that they could find interest in the mere relation of their instincts, however pleasantly detailed?

The first anxiety of a writer is, as all the world knows, to establish a kindly sympathy between himself and his readers; but how can

this be speedily created betwixt one who, as an Entomologist, would seem to think of nothing but insects, and "the many" who have always regarded them as below a passing thought? With even a slight knowledge, once acquired, of their wondrous ways, the latter will be induced to a confession that these "minims of creation" are *something*, even in themselves; but it may be well, meanwhile, for him who would bring them into general notice, to invest them with the charm of adventitious interest and reflected confidence. Insects are peculiarly capable of being thus treated; for in their analogies and correspondences, illustrative and emblematic, innumerable are their relations with other things, from the most trifling objects of the world we live in, up to the highest objects of human contemplation. Multiplied, then, and still multiplying, as are books on Entomology, we venture to think there is yet scope and use for one of a character more discursive, a book not professing to teach the science, but to persuade to its study those who may have time and opportunity for the pursuit; and to show those who have not, that they may nevertheless find interest and pleasure in common observation (not commonly exercised) of the insect million by which they are surrounded. With a confidence that some such work might be generally read, though by no means equally assured of our ability to write one, we long had wavering thoughts of making the attempt. At last we resolved to try, reminded by a returning epoch (a brush *en passant*, from the wing of time) that while we doubt and linger,

"La vie a differer se passe."

The end of the year was at hand: "Tomorrow" said we to ourselves, "we will really begin our work for everybody about insects. This very evening shall be devoted to a final

decision on its plan;” for under a hundred Protean forms, and almost as many different names, had our intended work been floating for months before our “mind’s eye.” Letters—Sketches—Conversations, these were familiar shapes into which our materials might be molded, but they seemed in one sense too familiar; the public taste might be tired of these hackneyed modes of dressing up the sister sciences. Besides, clothing such as this however light would over-much confine us in the very discursive rambles which we had thought of taking amongst our creepers, and flyers, and swimmers. Episodes might better serve our purpose, and impose fewer shackles on our roving fancy: Episodes, then, shall they be called—Episodes of Insect Life, providing every month a seasonable admixture of the Real and the Ideal.

A shrill sound broke upon the stillness; another chorus, within the house, succeeded by the hushed peal without. The Crickets, from the kitchen below, were uplifting their chirping strains to salute, in full concert, the new-come year. We were at no loss, now, for at least one cheerful subject wherewith to com-

mence our Episodes. Bless their merry voices for the opportune suggestion! Forthwith we took up not our pen, but our candle, and descended to the lower regions, of which we found our chirpers left in sole possession. The noisy varlets broke off, instantler, in their song, and each to his hole or cranny scampered off at our approach; but we captured a straggler in the very act of draining the milk pot, and carried him off to our parlor fireside for the cultivation of a more intimate acquaintance, and with a view of making him as well known to our readers, by sight, as he or rather his merry fraternity are likely to be already by sound. Finish thy song there, little Master! and “with what appetite thou mayest,” and your supper too! said we, as we placed our lean lank bodied prisoner beneath a tumbler under which we were so merciful as to insert a few crumbs of bread, one of the Cricket’s favorite repasts. Aye, leap as though wilt and climb against gravity up the smooth walls of thy crystal prison, there thou shalt abide till we have taken thy portrait.

Episodes of Insect Life.

APPLICATION OF CHARCOAL.

In estimating the uses and application of charcoal in horticultural matters, we must look to the influence it exerts in two distinct points, viz.: chemically and mechanically. In the first of these—that is, chemically—its action would appear to consist in applying food directly to the plants which are under its influence, by regulating the combination of substances which are capable of supplying nutriment; and in the other case—that is, mechanically—its influence seems to consist in regulating the conditions and bearing of certain matters which are liable to become ill adapted to the purpose for which they are designed; but wherever charcoal is applied to the soil in which plants are cultivated, these distinct and separate influences go on together simultaneously, and, therefore, we may reasonably infer that its beneficial character may be in part ascribed to both.

The chemical composition of charcoal would seem to suggest that it may be the means of supplying plants directly with a portion of matter which they can appropriate to their nutrition. It consists of impure carbon, (the diamond being composed of carbon in a pure state) and carbon entering into combination with a portion of oxygen. is then capable of ministering to the growth of plants, though, whilst in a free and uncombined form they can not absorb it. When it is combined with a portion of oxygen, which it derives from the atmosphere, it is rendered capable of supporting vegetable life, wherein the carbon is fixed, and serves to increase the vegetable fabric. So say the chemists, and we gardeners, for the present, at least, must be content to follow them, although, as the science of chemistry, without doubt, is regulated by simple and unvarying natural laws,

there is no reason why an attentive study of the science should not enable gardeners to speak on these matters from personal conviction, and not, as at present, on the authority of others.

But chemists tell us more. They say to us that except under the influence of a considerable degree of heat, charcoal is a substance that decomposes so slowly, that in the ordinary conditions of vicissitude and exposure, it is almost imperishable; we must not, therefore, overrate its chemical influence. When they exist even in such infinitely small proportions as to be altogether inappreciable to the senses, we may believe that even the small degree of chemical action which can be supposed to take place between charcoal and the elements of the atmosphere by which it is surrounded, is directly beneficial to plants.

The mechanical action of charcoal is twofold. In common with all similar substances and materials, its admixture with the soil renders the latter very perfectly adapted to the free passage of moisture through it, and therefore, its use tends to prevent stagnation of moisture in the soil; beside this, it has a strong affinity for moisture, and thus it attracts and imbibes a considerable proportion during its passage through the soil, and becomes a reservoir of it for the roots of the plants. It parts with this moisture slowly, in proportion as the capillary action of the fibrous roots abstract it; and thus it serves to regulate and equalize the supply of fluid which is available to the roots. It has been hinted, that this water—a compound of hydrogen and oxygen—becomes carbonated whilst held by the attractive force of the charcoal; and if so, it must be specially beneficial to plants, since it would directly supply them with a portion of carbon.

As an adaptation of its mechanical action, I conceive it might be advantageously employed in the case of valuable plants, to

counteract the injuries which frequently result from the interior of the ball of earth becoming dry, which, when once the case, it becomes almost impossible again to moisten it by any rational means. It is my belief, that a greater number of valuable plants are lost from this cause than any other. The manner in which I think charcoal could be made to remedy this evil, is by introducing a few pieces perpendicularly, and extending quite through the ball of earth, at each successive shifting, and keeping them as near the center as possible; these could then be kept wet by any simple capillary contrivance, and might be made effectually to keep the center of the soil in a duly and regularly moistened state. It would also extend the influence of the atmosphere among the roots, as the channels which would serve for the passage of water, would, when not so employed, be capable of transmitting air.

Practically, I may mention that I have seen in many cases the beneficial influence of charred blocks on the appearance of orchidaceous plants that have been attached to them, which is apparent in the more pellucid aspect assumed by the growing points.

GEORGE SWANSON, *Gardener.*

Cincinnati, 1851.

REMARKS.—I conceive that the great use of charcoal, beside its mechanical influence, depends upon the wonderful property it possesses, of condensing within its pores, immense quantities of carbonic acid gas and ammoniacal vapors, which it constantly absorbs from the atmosphere, and preserves, stored up, for the rootlets of plants, it here acts like *humus*; further, it may “carbonate” the moisture that percolates through it, because water has a strong affinity for the carbonic acid gas there stored up in such a remarkable manner.—ED.

GRAFTING.

On the Affinity of Grafts and Stocks.

I SHALL only say a few words on the affinity of grafts with the stocks on which they should be worked, in order to assist in destroying the errors of some ancient authors, and which are still credited by some persons, who are led away with the false idea that they may successfully graft trees, or other plants, on each other, although these should have no family relationship. In consequence of this ignorance, it has been said, that in order to obtain black roses, you must graft on the black currant, and to have green on the box. They would also wish to persuade us that all trees will take on the olive, and the olive on the fig; the vine on the walnut and cherry; the peach on the willow; and the apple on the great cow-cabbage, etc., etc. Happily, our modern authors, and the enlightened men of our age, have entirely rejected these false assertions. It is now well known that, in order to graft with success any woody or herbaceous plant, it is necessary that the plant furnishing the graft be of the same family as the stock; or, frequently, that both should belong to the same genus, or to varieties of the same species. There should also be some analogy between the saps of the two individuals, not only on account of their affinities, but also with reference to their proper species. Thus, we may graft with success the plum on the cherry, and *vice versa*; the apple takes on the pear, and *vice versa*; but although these genera are of the same family, nearly related, confounded, or united by some learned botanists, yet they rarely exist united two or three years. [?] With regard to the vigor of the stocks, we prefer those that are strong and hardy for large trees, and the weaker for those of smaller dimensions. As to the persistence of the leaves, and the movement of the sap in the subjects to be united by grafting, it is in general necessary that they should nearly correspond. We have, however, some examples to the contrary. The *Prunus lauro-cerasus* and *P. lusitanicus*, both evergreens, live for some time grafted on the Bird cherry, *Prunus padus*, and are less sensible to the cold than those growing on their own roots. The *Eriobotrya japonica* and *E.*

glabra, also evergreens, live a very long time grafted on the *Mespilus oxyacantha*. The Cedar of Lebanon, *Larix cedrus*, grafted on the common larch, *Larix europæa*, lives upward of ten years, but it remains stunted and dwarf. There are other well known facts of this kind, which I need not mention here, as they only prove exceptions to the general rule.

Of the qualities which branches and shoots ought to possess when cut from the trees, and the means to be adopted for preserving their vitality—many authors recommend taking the shoots produced at the extremities of healthy vigorous trees. The theory which they develop seems to be conclusive.—It must however give way to the subjoined observations. Some years before the first transfer of the *Ecole des Arbres Fruitiers du Jardin des Plantes*, effected in 1824, I was obliged to take grafts from more than four hundred of these trees, of the different sorts, which were found to be in a state of complete decrepitude, often covered with canker, burns, etc. Such grafts, put on healthy young stocks, have all grown with remarkable vigor. These trees, from twenty to twenty-six years old, and of which many had attained the height of more than thirty-six feet, all bore fruit in prodigious quantity, and were free from original disease, when they fell under the ax, in 1841.

The proper sorts of shoots for grafting and budding are not easily known by those not well experienced in the art. In taking shoots for buds, more especially, they sometimes make enormous blunders by cutting either too early or too late. In general the shoots ought to be of medium thickness, excepting those having slender wood, and in that case the thickest ought to be preferred; all ought to have made the greater part of their growth, in order that a considerable number of the buds on the lower parts of the shoots may be completely formed. For such only should be reserved for budding; seeing that the bark adjoining these will be also in a firmer state; for if the parts are too tender and too herbaceous when placed in the incision made in the stock, they are apt to be decomposed by the abundance of sap in the latter, which

ought always to be in greater flow than that of the shoots which furnish the buds.*

The shoots of this description being separated from the trees, the herbaceous extremities are immediately cut off, as are likewise the leaves attached to the eyes reserved, always taking care to preserve at least one-fourth of their petiole.

The shoots should not be exposed to the free air, and they should be kept in a cool moist place till such time as they can be budded; but whatever means may be employed for preserving their vitality, we should avoid too close packing, in order to prevent the fermentation of the substances employed for the purpose.

We know that the moss of our woods (*Hypnum*) is very proper for this purpose. We gardeners often furnish ourselves with a large hollowed-out cucumber, in which we place the shoots. In this situation they may be preserved in a good state for ten days.—If for a longer period, they may be put into a bottle, which must be filled up with honey, and then corked and sealed hermetically.—In this state they will be preserved as fresh as possible during the journey.

Scions, for grafting in spring, are of course much more easily preserved than buds. For these they prefer the extremities of strong shoots, or any other part of which the thickness is about equal to that of a quill, and the length of from sixteen to twenty inches, with prominent eyes, not excepting the terminal, which ought always to be preferred, if it has not burst its envelops.

It has long been remarked in many coun-

*I am anxious to impress upon my readers, the necessity of paying particular attention to this observation; it is general for all the operations.

tries, that in order to preserve grafts, especially for transportation, they ought to be separated from the parent tree before they have commenced to vegetate. In the climate of Paris, the month of February appears to us to be the best time for taking them off; they ought then to be placed in a northern exposure, in a horizontal position on the soil, and covered over with some of that adjoining, to the depth of about 2½ inches. They should remain in that position till their buds are well swelled, by which time the stock intended for their reception will be much more advanced, a necessary condition, as I have already explained. If the cuttings for grafts have to be sent to a distance, it is best to send them off as soon as they are taken from the tree. If the journey require only three weeks, or a month, it will be sufficient to tie them up in packets, putting some dry moss between them, in order to prevent them from being bruised, and then insert their basis in a ball of moist clay, covered with fresh moss, the whole tightly enveloped in a thin coating of straw. But if the cuttings have to be sent to a great distance, so as to require several months on the way, they should be inclosed in a box, in small parcels, all laid with their tops in the same direction, their thick ends being covered with clay and fresh moss, the whole compactly fastened with laths likewise coated with moss. If for a long sea voyage, care should be taken to close the box, but if not, some holes may be made in the top to prevent the shoots becoming moldy.

I have sent grafts packed in this way to St. Petersburg, New York, etc., and they have always arrived in good condition.

Gardener's Chronicle.

MONTGOMERY PLUM.

I NOTICED, in an article on Plums, in your June number, something requiring explanation from me, but have not been able, for want of time, to attend to it. I once called the Montgomery a Plum, (though it goes by the name of Prune,) and for this reason:—It is customary in Lancaster to call any new seedling, Plum, or any nameless one, Prune, or Plum, according as it is oval or round; it was so with Mr. Carpenter, and, by the en-

closed letter, you will perceive it was also so with others. In the latter case, where two different sorts have the same name, it is well enough; but I think, upon the whole, it were better for horticulturalists, generally, to curtail and simplify as much as possible, and not dub a Plum "Prune," simply on account of shape, without reference to sweetness or drying qualities. The above article also recommends the Groundacre Plum, and knowing

that there is a mistake in the name, I wrote to the namer of the fruit, Mr. Gundaker, of Lancaster, Pa., for a description, which he has kindly furnished, and which I take pleasure to enclose to you.

The Gundaker Prune is, doubtless, the fruit Mr. Fahnstock alluded to, as it agrees with Mr. Carpenter's description of it.

The excessive heat and drought of the last three weeks, has caused a heavy loss to the wine makers of Ohio, leaving but about one-third of the half crop anticipated, the balance being dried up. Three weeks since, my crop of grapes, on three acres, was estimated at 600 gallons; to-day it is all pressed, yielding but 130 gallons, very sweet, but containing also much sediment; and I have done better than many others.

I was much pleased with Mr. Van Buren's experiments on the curculio, in the last number, and hope he will not be discouraged. I shall send you some of my experience, when time allows.

Yours, respectfully,
C. G. SIEWERS.

Cincinnati, Sept., 1851.

The following is Mr. Gundaker's letter, referred to:

C. G. Siewers—Dear Sir: Yours, of the 30th of August, came duly to hand. You inquire relative to the origin of the Gundaker Plum. The fruit you allude to was raised by myself, somewhere about 32 years ago. I planted some seed, of what kind of fruit I do not recollect; there were about a dozen grew, and when going to inoculate them, two of which, judging by the leaves, etc., I let stand, thinking they would bring good fruit.

The one you allude to was named the Gundaker Prune, and the other Gundaker Plum. The Prune is of a yellowish white color, nearly as large as the Blue Prune, and of the same shape, (oval,) very high flavored, and a good bearer. The Plum is of a purple color on one side, and the other a light color; heart-shaped, resembling a Plum called the Golden Drop, but larger in size, and a good bearer.

I should have answered yours before this, but my absence from home was the reason of my not doing it.

Respectfully, yours,
SAML. E. GUNDAKER.

WHITE FRUIT NOT ATTRACTIVE TO BIRDS—Birds appear to prefer red or purple fruit to white. The white Tartarian cherry, a native of the Crimea, and a fine sweet-flavored fruit, is not subject to their depredations, while the Mayduke, Bigarreau, and other varieties suffer from their attacks. The white-fruited elder escapes the notice of black birds, even when they have stripped bushes of the common purple fruit; and what is more striking, is not so palatable in flavor as the white variety. This kind is sold in the markets of Dresden for the purpose of making preserves. Boiled with sugar, they form a fine dainty fruit devoid of color; not having the appearance of being ripe, seems to be the reason why these epicures of nature are not tempted to try it.

Gardeners' Chronicle.

NEW WATER-PROOF DISCOVERY.—A Mr. Martin, of Cockermouth, England, has discovered one of the most wonderful processes for rendering all kinds of fabrics water-proof. He has patterns of every fabric, from the finest open lace to the coarsest fustian of the mechanic. Each appears as if cut from the web; not the slightest difference is observable betwixt those that had undergone his system of water-proofing and those that had not. Even the most delicate silks are not in the least altered, either in color, feel or smell, except they are perfectly impervious to moisture.

The most extraordinary as well as the most valuable characteristic of the discovery is that though cloth of any description, after having been water-proofed by Mr. Martin's process, will resist boiling water, which makes not, in fact, the slightest impression upon it; it is not in the smallest degree less impervious to vapor, the steam and even the breath passing as freely through it as before it was submitted to the water-proofing process.—*L. Journal.*

S. W. COLE, late associate editor of the *New England Farmer*, and formerly of the *Boston Cultivator*, died at his residence in Chelsea, on the 3d inst. He has done good service in behalf of agriculture in New England.

EVERGREEN TREES—FOR USE AND ORNAMENT.

THE bleak and exposed situation of a large portion of the farm buildings in our Northern States, renders them, in appearance at least, during our long and cold winters, cheerless and uninviting. Convenience to the traveled road, and easy access to the different fields of the farm, frequently prompt a man to erect his buildings in a proper location, irrespective of the wind and snow.

Every person, who has paid attention to the subject, must have noticed, in the cold, windy weather of winter, the difference in the apparent temperature about a house sheltered on the north by a thick wood, or even a grove or belt of trees, in happy contrast with one exposed to all the "peltings of the pitiless storms," without a tree to break their force. Fortunately, there seems to be a spirit of improvement among a portion of our people, in reference to planting shade and ornamental trees.

For this purpose, our various evergreen trees are coming into requisition. Every country dwelling might—at a small expense, too—be greatly embellished by planting the spruce, fir, hemlock and pines about it. They serve to give an air of neatness and taste to the homestead, as well as a grateful shade in summer, and protection in winter. If a belt, of only one or two rods in width of these trees, is set out upon the north side of the buildings, and properly cared for, in a very few years, it "will serve wonderfully to mitigate the evils of our long and rigorous winters, which are so generally felt," and thereby much to lessen the annual expense of fuel. Said Mr. J. J. Thomas, in the Albany Cultivator of last January, "To come at once to an estimate by bank-note consideration, we are satisfied, by considerable observation as well as actual experience, that on many bleak situations, at least one-half the fuel consumed might be saved, by planting twenty-five to fifty good evergreen trees across the sweep of the prevailing winds."

It is a matter of some importance to one who values coin, whether he pays twenty-five or fifty dollars a year for cord-wood; and whether by saving twenty-five dollars a year, he may save the value of a small farm in a life-time. And if, at the same time that this positive tangible profit is secured, a

tasteful and attractive appearance is given to a home—an influence of very great importance to the moral education of a rising family—the matter is most certainly worthy of attention.

Many persons who transplant evergreen trees fail to make them live. They do not seem to be aware that any more skill is necessary in transplanting the hemlock or pine than in transplanting the apple or willow. In the spring of 1847, several persons in the village near where I reside, at considerable expense of time and hard labor, took from their native beds and set out in their door-yards, and about their grounds, a large number of beautiful fir trees, from eight to sixteen feet high. I saw the trees as they were brought into the village on wagons. Most of the large roots were cut off within 18 inches of the base of the trees, and all the roots were as bare of soil as the limbs. I remarked to the persons engaged in transplanting the trees, that they were laboring in vain; they thought otherwise. Their door-yards presented a fine appearance until midsummer, when a sad change came over the symmetrical firs. Every tree, except one, died before autumn. These men will never again be caught transplanting evergreens until they obtain more correct notions of the art.

The same spring, I transplanted many hemlock, spruce, fir, larch, white and Norway pine trees, from six to ten feet high.—In selecting them, I followed Sir Henry Stewart's advice, of "choosing trees that stand naturally in an exposed or open site." They were all taken up with a ball of earth about the roots; nearly every one lived and are thrifty, except the Norway pines. There were about a dozen of these, which grew on a dryer and more gravelly soil than the others, most of which was shaken from the roots by the jolting of the wagon—and only two of the number lived through the summer.

Since that time, I have transplanted many more, with almost perfect success, but by a process somewhat different. I now choose a day, for taking up the trees, that will be succeeded by a cold and freezing night, (either late in autumn or early in spring;) I commence by cutting, with a sharp spade, a suitable distance from the trees, in order

to take them up with a ball of earth attached to the roots, proportioned to the size of the trees; after which I leave them through the night, the trees *lying* upon the ground, so as to expose the ball of earth to the action of the frost. Early next day, they are taken home, and set out before the frozen earth thaws. It is better to have the holes previously dug, with the excavated soil piled up by the sides of them—throw in enough of this to bring the trees to the right depth. Place them carefully in the holes, and fill up with the soil, and dash on a bucket or two of water to fill up the interstices about the roots. Trees transplanted in this manner will scarcely at all feel the removal, and will grow nearly as well the next year, as if they had remained in their native locations.

I think this a safer and cheaper way of transplanting resinous trees, than to dig them up, as recommended by some, in the winter, when the ground is frozen hard as a rock;

or, as directed by others, to prepare old canvass and bagging, with cords and strings to tie up each tree separately, so as to keep the soil about the roots from being shaken off in the removal. It is only through the agency of the ends of the small roots, that trees are able to take up the moisture of the soil. If the rootlets of resinous trees are once dried, they are for ever useless. It is this fact that renders them so difficult of successful transplanting.

My love of our beautiful evergreen and other forest trees, must be my apology for the length and minuteness of this paper.—For, with Miss Cooper, who says, in her "Rural Hours," I think "a fine tree near a house is a much greater embellishment than the thickest coat of paint that could be put on its walls, or a whole row of wooden columns to adorn its front; nay, a large shady tree in the door-yard is much more desirable than the most expensive mahogany and velvet sofa in the parlor."—*Jour. of Agr.*

ON THE LIMITED DURATION OF VARIETIES OF PLANTS.

MR. JOHN TOWNLEY, of Moundville, Wis., has written an elaborate article "On the limited duration of varieties of plants," which appears in the October number of the Horticulturist. Hitherto vegetable physiology has been too much neglected by American writers on the cultivation of fruits and plants, and we are glad to see a gentleman of Mr. T.'s reading and talent leading off in so important a discussion. He is a believer in the theory of Mr. Andrew Knight, respecting the limited duration of varieties of plants, and displays no mean ability in support of the same. In a practical point of view, this theory assumes, that fruit trees propagated by buds, as in grafting, budding, and layering, can not outlive the natural lifetime of the parent seedling, whatever that may be. Thus, if we assume that the full age of an apple tree is two hundred years, no trees propagated from its buds can be expected to live after that time, no matter when said buds were separated from the parent tree, nor how carefully the young offshoots may be pruned and nourished. If this doctrine be sound, then there is an obvious necessity of going back to seedlings during the natural lifetime of

every plants, which in the annual potato plant is of course every year. From reading, probably the same authors consulted by Mr. Townley, we confess to have formed the opinion that in growing potatoes and other vegetables, it is necessary to recur occasionally to seeds, instead of propagating from buds indefinitely; but more extended research and observation lead us to question the existence of any essential difference in the vital force of plants and trees, whether they spring from seeds or buds, resulting from their origin. Neither Mr. Knight, Mr. Loudon, nor any other practical cultivator, has, to our knowledge, shown any greater deterioration in *budlings* (to coin a term) than may be found in *seedlings*, if either be badly treated. All living things are liable to disease as well as to die, no matter what their parentage. Hence, the existence of weakness and constitutional deterioration is peculiar to no varieties of plants or animals; and as buds are one of the natural provisions for the multiplication of plants, and composed of cells precisely as seeds are, why should we infer, without positive proof of the fact, that a being developed from a bud

is inferior in any respect to one developed from a seed? Art gives to a bud no new vitality—no new function. All that it possesses are natural endowments, and as free from defects as any seed whatever. If a parent egg, or seed, or bud, has any constitutional infirmity likely to affect injuriously the generation about to be ushered into a larger existence, the fact that such malady is hereditary, or communicable from parent to offspring, proves nothing for nor against either system for extending a race. The *system* being one of nature's contrivances, or the offspring of Creative wisdom, is not defective in itself; but the failure to attain satisfactory results in trees grown from buds, arises from bad management in unwise and short-sighted man. We may not know wherein we fail in potato culture, or fruit culture, in using the vital agency of buds, but it is more philosophical to attribute our misfortunes in that line to our ignorance of the causes of blight and unexpected decay in tubers and fruit trees, and our neglect to comply with nature's laws, than to ascribe it to a natural defect in all buds from which plants and trees are propagated.

Mr. Townley assumes many things as true which are not sustained by any facts adduced by him, or other evidence known to physiologists. He starts with the assertion, that vegetable life, like animal life, has its fixed periods of duration. Strictly speaking, neither the life of animals, nor that of vegetables, has any "fixed period" when it must cease to exist. Nor is there anything in common in the modes by which the bodies of plants and animals are nourished and preserved from dissolution, that should make "the duration" of the life of a tree as fixed as that of a man or ox. Every part of the tissues of an animal, including its solid bones, tendons, and skin, as well as muscles, nerve, brain, and other organs, is constantly being absorbed and removed out of the system as effete matter; and this loss must be made up by new and appropriate aliment, fresh from a recent supply of food, even in adult animals that gain nothing in weight. Nothing like this is seen in the support of a tree, or in vegetable life. The matter organized in the first year of the growth of an oak, remains as a part of its system ten centuries, should the tree stand so long. During all this time, after the cells of the heart-wood are filled and closed, vital-

ity has as little to do with them as it has with those in a coral rock, formed before our continent existed. There are numerous external influences that operate to prevent trees living any longer than we see them flourish in forests. They are attacked from without, and rarely die, like animals, from any organic or vital defects. If trees were never too thick in a forest, were duly protected from all animals and parasitic plants, watered, and properly manured, an oak might live twenty or thirty centuries as well as it now does two or three. Why not?

The duration of the existence of trees resembles far more that of an island than of an animal. An embryo island rises above the surface of water in a river, and gains in size by the deposit of additional matter upon that which existed before. A circulating medium brings a new supply of raw material from year to year, to augment the volume of the growing island. So the seed of a forest tree planted, by the hand of nature on this same island, adds year by year to the weight of organic and inorganic matter contained in the tree, drawn from surrounding elements. Dr. Schleiden, and other botanists, described trees believed to be 5,000 years old, and still living. What has such a tree which gains in weight every year for fifty centuries in common with an animal which is never two days composed of the same atoms, and whose life depends on a liberal supply of organized food, even after it has ceased to grow? Plants subsist on mineral, or disorganized elements, such as air, water, and earthy substances.

We will not say that there is no limits to the duration of varieties of fruit trees and of plants, for even continents do not last always, and families, and whole classes, both of vegetables and animals, become extinct from unknown causes, apparently to give place to new races called into being by infinite wisdom. Geology abounds in facts illustrative of transitions of this kind. The popular idea inculcated by Mr. Townley, that "varieties of plants" are of quite limited duration, is an easy and not unnatural excuse for the mismanagement of fruit trees, potatoes, and other crops. Mr. Knight, with all his artistic skill and large experience, did not comprehend the very modern science of feeding plants; nor was the excellent and truly learned Loudon better informed in that particular. This is no more

to their discredit than is the fact that electric telegraphs, printing by sunbeams, and reaping by horse power, have been discovered since their time.

Cold and heat, sunshine and shade, humidity and dryness, insects and fungi, decaying mold and undecomposing minerals, and excess of some elements and a deficiency of others, a feast of poisons and a want of food, are the extraneous influences which limit the duration of varieties of plants. These are sufficient to account for the early death of cultivated trees, and the premature dissolution of roots and tubers, without gratuitously assuming that there is some natural defect in the vitality of buds. The life of plants is well enough, whether communicated by buds or seeds, just as God has made it. But to understand how buds and seeds change their cellular into a vassular tissue, how substances imbibed through the leaves of trees can descend to their roots in a current of constantly ascending sap, and how each bud has a separate existence, so that a sweet and a sour apple may touch each other and yet preserve their peculiar qualities unmixed, requires more study than most cultivators bestow on this branch of their profession.

Is it not wonderful that so many thousands and millions of intelligent persons should eat apples from their childhood to old age, and never try to learn how an apple grows, nor to understand the nature and properties of the things which really make an apple? The editor of the Horticulturist hit the nail on the head, when he called attention to the marked deterioration of Seckel pears in the Philadelphia market, in consequence of neglect to feed the trees on which they grow, while the same kind of fruit grown in the less congenial climate of Boston, has recently been greatly improved by wisely adapting the soil to the natural wants of the pear tree. We have lately attended a number of agricultural fairs in New York, Massachusetts, Maryland, and elsewhere, and more to study fruits and learn what we could from the most successful cultivators, than for any other purpose. Mr. Clark, President of the Hampshire, Franklin, and Hampden Agricultural Society, (one of the oldest in the Connecticut valley), assured us that an apple tree there needed feeding as much as a horse does. The fruit on old apple, pear, and quince trees, which have been

neglected, is worthless; while that grown on old trees treated with leaf-mold, rotten dung, ashes, and lime, is fair and large. In no market in the United States can one study the results of good culture and no culture in fruit growing, to better advantage, than in Washington. The soil in the District of Columbia, and the adjoining country, lacks lime, phosphoric acid, and potash, to a degree that tells against both forest and fruit trees, as compared with Western New York, and our own valley of the Genessee. We have studied the soils and natural products of both regions with some care, and while conceding the superiority of climate to Washington, the elements of fertility are comparatively scarce in the rocks, drift, alluvium, and mold of that section. But we have never seen land more readily recuperated with lime, ashes, guano, or stable manure. The climate is admirable and the proportion of sand, clay, and iron, which are the foundation of all soils, is generally all that one needs to secure high and enduring productiveness. It is but few things that fruit trees, grape vines, potatoes, grass, and grain, require from the earth, and these man must supply so far as they are lacking. Science alone teaches him what these things are, and those that neglect and despise it, choose darkness rather than light.—*Genessee Farmer*.

MISSOURI WINE.—Hermann, in Gasconade county, is the chief wine growing district in Missouri. It is surrounded by luxuriant vineyards from which there will be produced this year from 30,000 to 40,000 gallons of wine. The day may come when Missouri will be as distinguished for her grapes and wines as she is for her lead, hemp, tobacco, and other leading products.

ALL the coffee grown in the West Indies has sprung from two plants taken there by a French botanist from the botanic garden at Paris. On the voyage, the supply of water became nearly exhausted; but so anxious was the Frenchman to preserve the plants that he deprived himself of his allowance in order to water the coffee plants. Formerly coffee could only be got at a great expense from Mocha, in Arabia.—*Etc.*

JOSEPH R. WILLIAMS' ADDRESS.

ACKNOWLEDGEMENT is due to some kind but unknown friend, for a copy of the *Constantine Mercury*, edited by Jos. Huß, St. Joseph's county, Michigan, containing the speech of Jos. R. Williams, before the County Agricultural Society, October 22.

It is an excellent practical address, into which a great deal of useful information has been compressed by the speaker. His allusions to the Homestead Exemption, and Horticulture, are here presented:

The institutions of our state happily render the homestead sacred. Neither the heartless and brutal grasp of rapacity, and extortion, nor the rude brush of misfortune, nor fell disease, nor sudden calamity, can deprive the family of a homestead once honestly acquired. There is one spot in which the family can nestle, one secure resting place, allowed by the providence of God, and sanctified by the laws of man. That spot should be made more attractive than all other haunts and resorts. The more comfortable and healthy, the more cleanly, the more fascinating to the eye it is rendered, and the more firmly it is protected and girt around, the more it will be cherished. Our countrymen too many of them are restless and migratory. Although we are nearly all emigrants, I think you will agree with me that one migration is enough. It would become us as a people to heed the wisdom contained in the doggerel of Poor Richard—

"I never saw an oft removed tree,
Nor yet an oft removed family,
That thrive so well as those that settled be."

When a man buys and sells residences and rudely severs their every clinging association, as he buys and sells horses, and vessels, and merchandise, he sacrifices many of the liveliest charms of labors, conquest and possession. If a man pitches from abode to abode, with no more affection than a crow in its flights, rests now upon one dry limb and then upon another, his labors must be aimless and cheerless, and he voluntarily deprives himself of much of the keenest satisfaction which life and trial afford. One of the first objects then of a farmer, should be to secure an eligible farm, which he is willing to cultivate, de-

velop, embellish and enjoy as a home in the most comprehensive sense of that term.

Horticulture is embraced as one of the objects of your association. It is too much neglected. While a few pursue it intently and as a passion, the many neglect it. Before urging this topic upon your attention, let me say, if it will afford any encouragement, that I personally made critical comparison of the fruits and vegetables exhibited at the recent State Fairs, at Rochester and Detroit, and I could not avoid the conclusion, that the fruits of Michigan excelled those of New York, in beauty, health, and perfection, though not perhaps in variety. The samples, however, in both cases were mostly exhibited by amateurs and nursery-men. They should have been poured out from every farm house. Many a man leaves a waste around his dwelling, when if he heeded the suggestions of interest, health, taste, or comfort, he would surround himself with a garden and an orchard. Fruit should be cultivated for profit. No expenditure will enhance the value of a farm so much, in proportion to the outlay, as the investment in an orchard. Fruit is a cheap luxury. The tree is growing while we are sleeping. Once planted, with trifling but continuous care, and the bestowal of odd hours from time to time, the orchard rapidly matures. One prolific year repays the whole expense. I last year raised more than two hundred bushels of delicious fruit, apples, pears, plums, peaches, and grapes, in a garden of a little more than an acre, which six years before had hardly a tree of cultivated fruit upon it. You need not fear that the best of fruit will become a drug. The more abundant, the more certain the channels to market. Let me remind you, that before all of our children are laid in the grave, cities, which can be reached in twelve hours from any part of this county, will have grown up containing half a million of inhabitants, and affording insatiable markets for fruit. We can be prepared to furnish those markets, and enjoy the perpetual profit. Fruit should be cultivated for health. Ripe fruit is nutritious, refreshing, and highly conducive to health and longevity. In large cities, during the prevalence of cholera, and at critical periods, fruit is forbidden, not so much because

ripe fruit is deleterious, as because ship loads of fruit, in great markets, are gathered and transported before it is ripe. It is rendered palatable by the mellowing of incipient decay, and not delicious by mature ripeness. Hence there is an unpleasant acidity, a toughness and staleness in the pulp of much of the fruit sold in towns which is not found in ripe fruit just plucked from the bough in your own garden, with all the glow, and flush, and plumpness of life upon it. From your own garden you can enjoy a cheap and delicious luxury, which a townsman can not purchase at any price. The cultivation of fruit kindles a taste akin to a taste for the Fine Arts, and is eminently conducive to refinement, and constantly prompts to the acquisition of varied, curious and profoundly scientific knowledge, relative to the laws of decay and growth, the preservation, propagation, and development of vegetable life. It will render a home more beautiful, more genial, more attractive, an object I have just endeavored to enforce. What different ideas do we instinctively form of a country dotted all over with luxuriant or-

chards, groaning under their abundance, and a country whose roadsides present a dreary and sterile waste. Let the orchards of a people rival in beauty and brilliancy, that which was pictured on the imagination of Milton, when he described the garden of our first parents:

"And higher than that wall, a circling row
Of goodliest trees loaded with fairest fruit,
Blossoms and fruits at once of golden hue,
Appeared with gay enamelled colors mixed:
On which the sun more glad impressed his beams,
Than in fair evening cloud, or humid bow,
When God hath shower'd the earth; so lovely seem'd
That landscape."

Some refrain from planting orchards for fear of plunder. You should remember that the same brutal disregard of your rights, which tramples down your crops, and robs your orchard, would rifle your pocket books, and plunder your granaries, if it could be done with impunity. Impunity is the rule, not decency and honesty. If you wait till all mankind have manners, and delicacy, and honor, you will cease to strive to fill your pocket books and granaries, as well as to rear orchards.

CHEAP COVERING FOR GREEN-HOUSES, ETC.

I HAVE a few words to say about a cheap, effectual covering for green-houses, pits, etc., which will answer for the American climate, as it has answered for our severe winters in the northern parts of Germany for the last thirty years, to the greatest satisfaction under all circumstances. According to the size of your lights, have a frame-work so made as to cover the whole light.

Take paste-board of the most common kind, tar it well over, so that the tar will soak well in the paste-board; do it a second time, then according to the size of the paste-board, nail it on to the above mentioned frame, and put lath enough into your frame-work to make the paste-board tight, or rather keep it, when snow or rain is falling, from bending on the glass. After that is done, give the whole another tarring over with a better sort of tar.

I forgot to mention that it is best to put the tar on when it is either boiled or made thin by means of hot stones being put into it. After that is done, take a fine sieve and sift some sand over the whole, which will give it a nice appearance and prevent any sticking which

might be left by the last tarring. This done every second or third year will keep the shutters for many years. Any accidental hole can be repaired by sewing a piece of prepared paste-board in it. It is possible that many may think boards for shutters cheaper and better than this, but any one acquainted with them will know that the glass is very liable to be broken by them, besides getting so often out of repair, and being so very heavy when snow or rain falls on them. The way to secure these sashes (or shutters) must be left to any one's own choice.

P.S. It is the air or space between the shutters and glass which keeps the frost out.

Cor. Downing's Horticulturist.

Square Acre.

To lay out an acre square, 209 feet on each side is the nearest amount that will make an acre—being less than an inch each way over the exact distance—44,560 superficial feet, or $208\frac{5}{11}$ feet on each side, constitute an acre of ground.

FOOD OF PLANTS.

RETURNING to the consideration of the food obtained by a plant from the soil by the agency of its roots, we find that silica, or the pure substance of flint, is present in all soils, is soluble in water, requiring one thousand times of this liquid to dissolve it. (?) (Kirwan's Mineralogy, vol. 1, p. 16.) It is found in many plants, and all the grasses that have been analyzed. Alumina, or the basis of clay, is present in all soils, is so diffusible in water as to be inseparable by the filter, and much more so when any of the acids are present. (Sennebier's Physiology Veget. vol. 3, p. 18.) It is found in plants in minute quantities, especially in the grain of barley, oats, wheat, etc. (Schroeder in Gehlen's Jour., vol. 3, p. 525.) Lime is found in almost all soils; it is easily soluble in water, and there is but one plant that is not known to contain some of it as a constituent, the *Salsola Soda*. (Ann. M. Chemie, vol. 18, p. 76.) Magnesia generally present in soils, is soluble in water, and is found in many plants. Iron is present in all soils, in all natural waters, and all plants. Manganese is found in some soils, is soluble in water containing acids, etc., and is found in a few plants.

But none of these substances in a state of purity, either simply or combined, have ever been found capable of perfecting a plant, through all the stages of growth, when moistened only with distilled water; the contrary is the case when the water contains in solution vegetable or animal matters, as the dung of animals. Now these substances contain carbon, hydrogen, oxygen, nitrogen, and various salts; the three first are absolutely necessary for the existence of all plants, every part of which is chiefly composed of them; nitrogen is found in most plants, and the importance of salts to vegetation is demonstrated by the facts, that clover will not flourish where there is no sulphate of lime; that nettles follow the footsteps of man for the nitrate of potash, which always abounds near the walls of his habitation, and that marine plants languish for the common salt of their native haunts. Salts of some kind or other are found in every species of plant, but none of which the constituents have not also been detected in soils. During decay, vegetable and animal matters

also exhale various gases. Carbonic acid, hydrogen, carburetted hydrogen, ammonia, etc., are of the number, all of which have been applied to the roots of plants with great benefit, by Sir H. Davy, and others.

Although plants will not grow upon soils composed of the earths only, yet these have a great influence over plants, not merely by their secondary powers of regulating the amount of moisture, heat, etc., but by entering directly into the constitution of the plant; for it is a result of experience, to which we know no exception, that a plant contains more of any given earth, if grown in a soil where it predominates, than if grown in a soil where it is in less abundance. This fact was first pointed out by M. Saussure, who found that the *Rhododendron ferrugineum*, when grown on the calcareous formation of Mount Jura, contained in its ashes 43.25 per cent. of carbonate of lime, but only .75 of silica. On the other hand, the ashes of the same plant, from the granite district of Mount Brevere, contained 2.0 per cent. of silica, but only 16.75 of carbonate of lime.

However varying the proportion, yet every soil is composed of silica, alumina, lime, magnesia, oxide of iron, salts, and animal and vegetable remains. The most important consideration is, what preparations those are which constitute a fertile soil.

The *beau ideal* of a fertile soil, is one which contains such a proportion of decomposing matter and of moisture, as to keep the crop growing upon it always supplied with food in a state fit for its consumption, yet not so superabundantly as to render the plants too luxuriant, if the object in view is the propagation of flowers or seed; but for those plants whose foliage is the part in request, as spinach, or of edible bulbous roots, as onions, which have a small expanse of leaves, so as to be almost entirely dependent on the soil for nutriment, there can scarcely be an excess of decomposed matter presented to their roots. Spinach, on rich soils, will yield successive cuttings the same as asparagus; the latter, especially, demands abundant applications of nourishment to its roots; since, like the onion, it has little foliage and slightly fibrous roots, at the same time that

it has to afford repeated cuttings, and thus requiring a repeated development of parts, needs abundant food in its immediate neighborhood.

A soil with a just proportion of decomposing matter, will be capable of absorbing moisture, during the droughts of summer, from the atmosphere, for the most fertile soils are always the most absorbent, yet it must not be too retentive of moisture, which is the case with soils that contain too much alumina; neither must it too easily part with moisture, a fault which is characteristic of those soils which contain excess of silica. A sub-soil of gravel mixed with clay, is the best, if not abounding in the oxide of iron, for clay alone retains the moisture, on the arable surface, in too great an excess; and sand, or chalk, on the contrary, carries it away too rapidly. It is, however, evident that to insure these good qualities in any soil, at all seasons, is impossible; and it is as manifest that a soil that would do in one climate, would fail in another, if the mean annual temperature of them should differ, as well as the amount in inches of rain which falls during the same period. Since, in the western part of England, more than twice as much rain occurs as in the most eastern counties, or in the proportion of forty-two to nineteen, a soil in the east of England, for any given crop, may be richer and more tenacious than the soil required for it on the western coast.

Alumina, or clay, imparts tenacity to a soil when applied; silica, or sand, diminishes that power, whilst chalk and lime have an

intermediate effect. They render heavy soils more friable, and light soils more retentive. These simple facts are important; two neighboring gardens, by an interchange of soils, being often rendered fertile, which before, were in the extremes of heaviness or lightness.

From these statements it is evident that no universal standard or recipe can be given for the formation of a fertile soil; the constituents which approach in their proportions to those of the following, can not be unproductive in any climate. It is a rich alluvial soil, which Mr. Sinclair, in his valuable *Horlus Gramineus Woburnensis*, gives as being the most fertile for the grasses:

Fine sand, - - - - -	115	28.75
Aluminous stones, - - - - -	70	17.50
Carbonate of lime, - - - - -	23	5.75
Decomposing animal and vegetable matter, - - - - -	34	8.50
Silica, - - - - -	100	25.00
Alumina, - - - - -	28	7.00
Oxide of iron, - - - - -	13	3.25
Sulphate of lime, - - - - -	2	.50
Soluble vegetable and saline matter, - - - - -	7	1.75
Loss, - - - - -	8	2.00
	400	100.00

We have already stated what forms a fertile soil; it may be added, that to constitute it eminently such, much of its earthy particles must be in a minute state of division. In the above analysis, 185 parts only were separable by sifting through a fine sieve, scarce 215 parts were impalpable, whereas poorer soils will often have 300 parts of coarse matter to every one hundred of finely pulverized constituents.—*Cottage Gardener*.

ANALYSIS OF ATMOSPHERIC AIR. .

M. LEWY, to whom the Academy had entrusted a commission for the examination of atmospheric air, in New Grenada, and elsewhere, has made an interesting report of his labors to that distinguished body. He has followed the accurate method of M. Regnault of analyzing by volumes, and so minute are his investigations as to descend into the infinitesimal quantities of the $\frac{1}{100000}$ th part of a degree of the eudiometer. As to France, his labors agree with those of Gay Lussac and others; that is, in volumes, of oxygen, 20.80; of nitrogen, 73.20; of carbonic acid,

4.00. In New Grenada, he took the mean of eleven observations at different localities, and found that in 10,000 volumes of pure atmospheric air he had uniformly 2101.425 of oxygen, 7894.567 of nitrogen, and 4.008 of carbonic acid. These proportions are almost identical with those observed in various parts of Europe. He remarked, however, that the air of New Grenada presented once or twice a year a very remarkable increase in the proportions of carbonic acid attended with an appreciable reduction of the oxygen; and causing a very sensible alteration in the con-

stitution of the atmosphere. M. Lewy ascribes this phenomenon to volcanic action; the frequent discharges of lava clearing the soil; burning up the forests; and setting free large quantities of the former gas. He found ten or twelve times the usual proportion of the acid gas at those periods; and a corresponding absence of oxygen. To the same volcanic causes M. Lewy lays the extraordinary development of vegetation in South America. The immense volumes of carbonic gas projected into the air, he thinks, contributes largely to nourish the prodigious growth of tropical plants, which frequently furnish us the spectacle of a large tree as a representation of what in less genial latitudes is only known as a lowly bush. Carbon, it is

well known, constitutes one-half the composition of wood.

In examining the atmosphere at the level of the sea, M. Lewy has arrived at some curious results. In daytime he found the air contained a little more of oxygen and carbonic acid than at night. The further he proceeded from the shore, the more marked the difference became. He attempts to account for the fact by suggesting the probable action of the solar rays, which, by warming the water during the day, determine the disengagement of a portion of the gas held in solution.

Air extracted from water is known to be more highly charged with oxygen and carbonic acid than the atmosphere.—*Times*.

NARCISSUS POETICUS.

MR. EDITOR—Some days since, looking over the leaves of an old scrap-book, filled with “shreds and patches, stories old, and reminiscences of by-gone readings,” I stumbled on the following legend, compiled from readings in Mythology. The origin of the names of several floral favorites of the garden, occupy the same nook in this receptacle of things “new and old;” but I venture to send you but one, which I hope may please your youthful readers, who have not already learned the origin of this “meek-eyed daughter of Spring.”

* * *

Cedar Bank, Mich.

NARCISSUS, an elegant and beautiful youth, was a son of one of the river gods, Cephissos, and Liriope, a sea-nymph.

Pausanias relates, that Narcissus had a sister, whose enchanting beauty attracted the attention of beholders; and the wonderful similarity in their features, inclinations, and pursuits, were equally the subject of remark. She constantly attended him in his hunting excursions, and between them existed the most tender attachment.

This beautiful creature died in youth,

leaving her beloved brother overwhelmed with grief. While lamenting her untimely death, he often resorted to a fountain in the vicinity, to contemplate his own face in its waters. The striking likeness he bore to his sister, made his own reflection really seem to assume the form of that lovely relative, whose death he could not cease to deplore.

The gods had pity for his sufferings, and, taking compassion on his grief, transformed him into the flower that now bears his name.

This flower is known to botanists, as the *Narcissus Poeticus*; it loves shady situations, and delights in the borders of streams. Its qualities are finely portrayed in this touching mythic story—for, bending its pliant stem, it would seem to behold its own pure petals in the stream, and soon falls, withers, and dies.

[The same kind hand has also selected the following paragraph from the Paris correspondence of the *St. Louis Republican*, which she considers good and truthful authority.—I have seen the account of Mr. Hebart's discovery, but have no corroborative autho-

city, and do not at all vouch for so wonderful a matter as this appears to be.]—ED.

"And now, let me tell you about a most beautiful and interesting discovery which has lately been made by a celebrated Parisian horticulturalist, by the name of Hebart. I was persuaded to go to his rooms a few days since, and I assure you I had no reason to regret the long walk I had taken. Beneath a large glass case, four or five feet in height, and as many in circumference, were placed pots of roses, japonicas, pinks, dahlias, china asters, etc., all in bud. By means of a certain gas, invented by himself, and which is made to pass by a gutta percha tube to any pot required, Mr. Hebart causes the instantaneous blooming of the flowers. The ladies in the room asked, successively, for

roses, dahlias, and japonicas, and saw them burst into full bloom and beauty, in a second. It was really wonderful. Mr. Hebart is now trying to improve on his discovery, and to make the gas more portable, and its application less visible.

The secret is, of course, his; and his rooms are crowded every day with the most delighted spectators. I wish I could send you the lovely camellia I received, which, when asked for, was so tightly enveloped in the green leaves of its calyx, that the color of its flower could not even be guessed at; and yet the request was hardly out of my lips when the beautiful white camellia was in my hand.—When he has made a little more progress, Mr. Hebart intends to get out a patent, and deliver his discovery to the public."

GARDEN MANURE APPLIED IN FALL AND WINTER.

FREQUENT complaints are made by those who are limited in their gardening operations, that whatever manures they do apply to their gardens, burn up their crops when the heat of summer comes on. We have felt this inconvenience too, and in looking around to find a remedy, have come to the conclusion that whenever a garden requires active stimulating manures, they should be put on in the fall, or winter; in this way rank stable manure may be applied, and spaded or plowed under immediately. It will have become by spring the proper food of plants, and as all manures leach upward, the surface soil will be in fine condition for the growth of vegetables; whereas, if the manure is applied at planting time, especially the crude manures generally used here, just as the vegetables are most wanted, they are fired by action of the sun on the manure, and the gardener has the mortification to find his labor and money thrown away. Whatever manures are applied in the spring, should be well rotted, or of a cooling nature.

The soap-suds from the wash-tub is a manure that may be applied with safety and with profit in the spring, and yet how few ever use it, except to enrich the earth

around their kitchens, and to make loathsome mudholes, when perfumed flowers, luscious fruits, and mammoth vegetables, might have been produced.

People do not yet properly appreciate the importance and value of a garden.—The bearing it has upon the happiness and health of a family, is plainly perceptible whenever we find a well conducted garden; how highly important, then, that we should understand the proper food of plants. He would certainly be a mad physician who would give his fevered patients stimulants to raise the fever higher and higher, until vitality was consumed. So with the gardener, plants are frequently stimulated to death for the want of proper cooling food. Our garden soils can scarcely be too rich, but it must be a richness retentive of moisture, and not, as would be the case if the stable manure was applied in the spring, a richness which burned everything in contact with it. Ho, then, for your wagons and wheelbarrows, load them up, and cover your gardens quickly; plow them up, turn the manure under; and when the early seed-time comes, you need not fear but a harvest will follow.—*Columbus Enquirer, in N. E. Farmer.*

HORTICULTURE ON THE PACIFIC.

It is gratifying to think that our brethren in other and far distant parts of the world, even in the islands of the sea, are enabled to enjoy the delights of an application of their labor to the ennobling arts of peace and especially to that of Horticulture, which, in its very essence, is conducive to the civilization and melioration of its devotees. A pretty little parterre in front of the cottage, a vine trained over the door or window casement, or even a flower in the window, is proverbially taken as evidence, *nem. contra*, of comfort, smiling faces, and happy hearts within doors, how humble soever the abode.

Our hearts will rejoice, therefore, to learn that even in a land where so many have gone in search of mere lucre, horticulture begins to attract attention,—where men have submitted to every hardship, have undertaken most wearisome and perilous journeys, and all for the sake of making a rapid accumulation of the yellow gold that carries all hearts captive, even here this beautiful and cheerful art is to be cultivated with the happiest results, present and prospective, not only in its sensuous but in its sentimental effects upon all concerned, whether as the producers or consumers of its luxurious products.

Mr. A. Randall of Monterey, California, has sent me the *Launceston Examiner*, printed in Van Dieman's Land, always a region of romance to my mind; in it is an account of a great horticultural show, from which some extracts shall be made, as they evince the attention bestowed upon this department and the consequent success.

From this it will appear that the English fruits are the most common, still there are some American varieties in the list.

"The show, though it exhibited a greater variety of finer apples and pears than were ever seen at prior exhibitions, owes its ex-

cellence to the efforts of former years. Time has brought round the returns which the early exertions of this society ensured, and the results are such as only the continued labors of an established society could secure. It is readily admitted that in comparison of what remains to be done, the present returns are small; but the opportunities it has opened are great—greater than will probably be appreciated or pursued till successive years have made their impressions on the minds of the community.

Its chief success has been with the orchard fruits; and hardly a country show in England could excel the present in its selection of improved sorts of apples. It is with the intention of directing the choice of some who are bent on the prudent course of extending their orchards during the coming season, that a description is added of the qualities of the improved kinds. The returns of an orchard in full bearing are beginning to be pretty well estimated. With 160 trees to the acre (one to the square rod), and apples at even 3s. or 4s. a bushel, a return of £50 per acre may be relied on; we should be pretty confident of its being nearer £100, whilst the difference in price will be at least one-half between apples of good and bad quality.

Kitchen Apples.—We suppose chief preference will be given to the French Crab (Easter Pippin), too well known to need comment; but the Winter Pippin will gradually obtain a larger share of attention; it is larger, a better bearer, and keeps the season through. A seedling at this show, however, the Marchington Pippin, sent by Mr. Smith, will be very likely to obtain equal notice. It is as handsome, if not handsomer than either, and pronounced to keep equally well; should its merits answer to the promise, it can not fail to be extensively cultivated. We have also the seedling of Mr. James Scott, the "Imperial Green," a conical shaped fruit, both large and bearing abundantly; and the Royal Russet, was also fruited by the society this year, and corresponded with those specimens which have been contributed by Mr. Heed and others at former shows; so that the orchardist has an extensive assortment to select from in his operations without that liability to the disappointments which have

hitherto attended his labors. The Hawthornden is pronounced not suited to this climate. The Norfolk Beaufin is still a desideratum. Dried apples will be a mine of wealth to our cottagers; we recommend experiments to be made with other varieties.

Dessert Fruit.—The great want in dessert apples has been for the early and the late varieties. The present show is too late for the exhibition of the early kinds; we know of only two sorts deserving of notice, the early Margaret and the Queen Charlotte, to which may perhaps be added "Christie's pippin." The Ribston Pippin is, it must be confessed, a comparative failure in this colony, from its not keeping. There is a new variety, an American apple, which ripens a few weeks earlier, that has all the flavor and perfume of the Ribston, which is worth a place in our gardens, though we believe, like its congener, it does not keep—it is in the garden of Mr. Bartley at Kerry Lodge. The Pomme de Neige, a Canadian Apple, was exhibited for the first time at this show. It keeps but a month or two, its flesh is snow white, and flavor good, it is from Mr. T. Scott's garden at Glen Dhu. Of the early winter apples, the Golden Harvey is sufficiently known, and from its great beauty and sugary flavor, will always command attention. It belongs, however, to the class of hard or tough apples, and will not be preferred for domestic use. Braddick's Nonpareil is much more to be commended, it is melting and soft, and in flavor at least equal to the Old Nonpareil, whilst in size it is twice as large, though otherwise not distinguishable. Next in order follows the Herefordshire or Royal Pearmain, larger than our common Winter Pearmain, and superior in flavor. Hughes' Golden Pippin, small, of exceeding beauty, and of good quality. The Blenheim Orange, on the contrary, is the largest dessert fruit we possess. It was exhibited for the first time in Launceston; its qualities will be better known another year, but it promises to be a valued variety and a good keeper. The next, but superior to any of the foregoing, is the Court Pendu, an apple of French origin, though now well known and as highly prized in England. It is perfectly round in shape and much flattened, with a color of glowing crimson; in flavor and keeping qualities it ranks somewhat short of the Old Nonpareil, but compensates for these by its beauty and,

its large size. The growth of the tree is as peculiar as the fruit itself—a great bearer, yet so dwarf as to be kept perfectly under, and if required, down even to the size of a gooseberry bush; its leaf is of a dark green, and curling at the sides, it blossoms so late as to escape all frost, and it is but little attacked by blight. The Old Nonpareil, though not commendable for its beauty or size, has all the other qualities which ensure it a preference for domestic use—that of high flavor, and of keeping well. The last in the present list will be the Dutch Mignonne, which has now been fruited for two years, though the liberties taken by the public with the trees at the Society's gardens prevent our obtaining decisive proof of its merits. If they should prove true to its present indications, this variety will combine great beauty, high flavor, long keeping, great produce, with a handsome growth; and therefore no garden should be without a specimen.

The good people of Launceston have a Society's garden in which fruit is cultivated until tested—here again they show their origin, following their European bent in the manner of conducting their affairs.

The following new varieties of fruits were sent from the Society's gardens:—Apples—Herefordshire or Royal Pearmain, Dutch Mignonne, Hughes' Golden Pippin, Court Pendu, Scarlet Nonpareil, Franklin Pippin, Reinette du Canada, Downton Nonpareil, Kentish Pippin, Royal Russet and others. Of pears, they sent Napoleon, Passans de Portugal, Winter Nelis, Beurré de Capiaumont, Moor-fowl Egg, Thompson's and others.

Flowers and vegetables contributed in no small degree to the interest of the exhibition, and this too, is only what we should be led to expect from the population of that country, which is made up to a great extent of the very people who are so famous for the produce of their little gardens and allotments in the mother country.

But from the California papers it appears that in the land of golden sands also, the cultivation of the soil and the production of fine vegetables and fruits has begun to at-

tract attention, and the native trees and flowers have been examined, seeds collected and brought to our own country from those distant shores, by W. R. Prince; and Mr. Shelton is now soon to be expected here, as appears in the *Alta Californian*. In the same paper are wonderful accounts of the large potatoes and onions that appear to thrive remarkably in that country. Fruits appear to do well wherever tried, but the citizens have not yet had time to experiment much; the Mission gardens are small and scattered, and constitute the chief collections—in them the apples and pears are spoken of as being very fine, and quite productive. From the same paper the following account of a Horticultural Exhibition is condensed:

“The agricultural and mineralogical, exhibition at the Verandah, is attracting some degree of attention in the community. It argues a healthy state of feeling in our midst. It shows that there are some at least here, who take interest enough in California, to spare a few moments from the eternal round of money getting to inform themselves of what our country can produce. Interesting as the exhibition is, we can not but feel, on going out, that it must be but a meager display of the resources of California. If so much can be called forth by so small an amount of labor, what an exhibition would we not have, should a few of our farmers take the same interest in an affair of this kind that has been displayed by Mr. Shelton. Some of the pumpkins on exhibition weigh a hundred pounds, measuring six feet in circumference.

Mr. L. M. Beard has sent as a specimen from his rancho, a beet, weighing forty-seven pounds. Further along are some onions, from the farm of Smith & Borden, some of which measure a foot and a half in circumference, and weigh two pounds and a half apiece. On one acre the above named firm raised seventy thousand pounds. Some of the beets grow in two months to the weight of five pounds. There is no question that California can be made one of the greatest sugar beet countries in the world. Potatoes

are shown from the rancho of Senor Jose Castro, in Santa Cruz, weighing three pounds each, and we noticed one cluster weighing five pounds. These are of most excellent quality, mealy and sound, having no heart. It may be mentioned too in passing, that a similar remark will apply to all the vegetables above spoken of, notwithstanding their great size. Among other articles we noticed a sweet potato squash, this vegetable grows to the weight of one hundred pounds. It can be preserved a long while, and be eaten from the time when it weighs but a pound until it attains the large size mentioned.

On the next table are cucumbers half a yard in length, produced in a garden in this city. Next to the cucumbers is a lot of tomatoes, these are the average of such as come to our market, and weigh a pound apiece. At the end of the room are specimens of oats and barley. An oat stalk is shown, which was grown at Sacramento, measuring thirteen and a half feet long. The wild oat is not very good. We noticed a bunch of barley, produced in Sacramento from one seed, composed of one hundred stalks. In other parts of the room are specimens of California soils, and on the eastern wall is displayed a large collection of paintings, accurately representing many of our beautiful wild flowers.

Truly this is a wonderful country, and the people there appear to so well satisfied of the importance of fruits, and of the possibility of growing them, that they are willing to give good prices to the enterprising traders who have been sending out large quantities of trees from our own city.

From the “*Placer Times*” it appears that the same success has attended the culture of vegetables in other places.

“Sacramento is fortunate in the unfailing supplies of fresh fruits and vegetables which the market has afforded during the present season.

At Stout’s may be seen the Horticultural products of this valley and that of San Jose in the greatest variety and profusion.

Mr. J. N. Horner’s crop of potatoes alone is 750 acres, averaging seven hundred bushels to the acre, which is 50 bushels less than

the last year. He has also now ready 25,000 head of cabbage, also turnips, tomatoes, onions, squashes, and every other garden product in relative abundance.

The trade price of most of these articles at this period, is so low that except where the business of farming has been conducted by experienced men, with economy and care, the result of the season's labor will prove any thing but encouraging. Among the articles of most general demand, potatoes are worth from 6 to 7 cents per pound; turnips, 4 cents; onions 15c to 20c.; tomatoes, 4 to 6c.; cabbages, 7c.; squash, 5c.; beets, parsnips and carrots, 4c to 8c. per pound; musk melons, \$20, \$30 and \$40 per hundred; water melons, 6 to 8c. per pound. Peaches are becoming plenty, but are generally of indifferent quality, worth from 15 to 25 cents per pound. Grapes, ordinary quality bring 25 cents per pound; a superior article commands 50 cents. Pears, "Bartlett," and other fine sorts are sold readily at higher prices. The apples of the country are small and in little request.

In a recent address Mr. A. Williams says:

"As we approach the center of the State, the banana, the orange, the lemon, the olive, the fig, the plantain, the nectarine, the almond, the apricot, and the pomegranate of the south mingle in the same luxuriant gardens of Los Angeles, with the peach, the pear, the cherry, the plum, the quince, and the apple of the north—the fruits of the oak and the pine, of gigantic size and delicious taste, furnishing to man and beast the richest and most nutritious food. * * *

And one uncommon article of fine white sugar, the exudation of a species of pine tree called the sugar pine; the successive range of mountains, whose extent is lost to view in the distance, waving with rich harvests of oats, the spontaneous productions of the soil; solid trees of the red wood on the banks of the Trinity and Shasta rivers, sixty-eight feet in circumference; hollow ones whose cavity has sheltered sixteen men and twenty mules for the night; pines crowning the dizzy peaks of the Sierra Nevada, three hundred and eighty feet in height, the first two hundred and fifty feet without a branch or limb—an extent of growth so far beyond the ordinary size, as to seem almost incredible, but well known, and seen and

verified by the uniform and concurrent testimony of many whom I see sitting around me. * * * * *

An onion grew to the enormous weight of twenty-one pounds; on the same land a turnip was grown which equalled exactly in size the head of a flour barrel. [!!!] A cabbage measured, while growing, thirteen feet six inches around its body; its weight is not known. The various cereal grains also grow to a height of from six to twelve feet. One red-wood tree in the valley, known as Fremont's tree, measures over fifty feet in circumference, and is nearly three hundred feet high. Added to these astonishing productions, are a beet weighing sixty three pounds; carrots three feet in length, weighing forty pounds. At Stockton is a turnip weighing one hundred pounds. A party of twelve persons partook of a single potato, larger than the size of an ordinary hat, leaving at least one-half of it untouched. These may be superlatives, but they do exist, and they show what our climate and soil are capable of producing. *

* * * * * [Pro-di-gi-ous!!!]

But let us cast our eyes around this hall and what do we see, even from this hasty collection and casual contribution? An agricultural, botanical, geological, mineral and floral exhibition, embracing nearly one thousand varieties of pressed flowers, of every hue, and of surpassing brilliancy, nearly two hundred varieties of which are illustrated by truthful and beautiful drawings; seeds of more than three thousand varieties of native flowers; twenty varieties of lily and other bulbous roots, embracing the remarkable soap plant, rivaling the finest boast of the toilet; about twenty varieties of the principal grasses and clovers; single stalks of the white lily, producing one hundred flowers, of indescribable delicacy and beauty. Stalks of oats thirteen feet high; wheat and barley having one hundred and fifty and two hundred mammoth stalks springing from one root, the produce of a single seed; the red sugar beet, twenty-eight inches in circumference, and weighing forty-eight pounds; some of only two months' growth, weighing six or seven pounds; cucumbers eighteen inches in length; onions five, six and seven inches in diameter, and weighing three and four pounds each—nearly seventy thousand pounds to an acre—and the whole number

from the acre supposed to average one pound each; one hundred and twenty pounds of potatoes from a single hill; one thirteen inches in length, twenty-seven inches in circumference, and weighing seven pounds and a half; raspberries five inches in circumference.

The walls were festooned with luscious grapes from Los Angeles—single bunches from Gen. VALLEJO, at Sonoma, weighing ten pounds; apples, peaches, figs, and other

fruits of enormous size, from the same; and specimens of countless varieties of plants, herbs, vines, fruits, grains and esculents, of exceeding size and singular perfection.

Among the tropical productions introduced are coffee, ginger, banana, plantain and pomegranate, which are now in process of successful cultivation. [Wonderful country, that, and wonderful accounts!! but who can say, "they are not true"?]

NORTH CAROLINA GRAPES.

THIS notice of the Grapes of North Carolina was sent by Mr. Togno, in an extra of a newspaper—the Wilmington Herald. The introductory remarks are by the Editor, whose State pride renders him unwilling to relinquish the claim of North Carolina to the credit of having originated the Isabella grape. I am not at all satisfied with the evidence adduced, to prove its foreign origin, though the account of Dr. McRee connects it with Mr. Laspeyre very distinctly.

As to the Scuppernong grape, I fear nothing short of a visit to its native haunts, or to the places where it has been "improved by cultivation," will ever overcome the prejudices that exist among us against it. This I may hope to accomplish one day, and shall then investigate impartially; but do not at all anticipate that the conclusions arrived at, will be favorable to the grape, nor to the *theory of improvement*, except as the result of raising seedlings, some of which will, no doubt, be superior to its congeners, and original.

The reader is referred to the excellent article by N. Riehl, and to a communication from Mr. Longworth, and is desired to suspend his judgment in regard to the wine until the specimens promised from Mobile arrive, and shall have been tested.

gentleman of Fayetteville, propounding certain interrogatories respecting the Isabella, Catawba and Scuppernong Grapes, and in pursuance of a suggestion therein contained, handed the letter above named to Dr. Togno, a gentleman of extensive research, and practical knowledge upon the subject of the Grape and its varieties, with the request that he would furnish us with an answer for publication. The Dr. has very kindly complied, and we take pleasure in presenting his communication to our readers. It will be found interesting and explanatory on many points. We must confess, however, our disappointment at the result of his convictions with regard to the origin of the Isabella Grape. It appears that he has come to the conclusion that this grape is not a native of this State after all, but a European variety, possessing all the characters of such, and none of those of an indigenous production.

This we believe runs counter to the general impression and belief prevailing for many years in this State, and other sections of the country. The Isabella was always classed, unless we are greatly deceived, among the natural products of our soil, and we confess we are loth at this late date to yield up a point which robs North Carolina of the maternity of this delightful table fruit. So many years have intervened, and authorities lost, that it is almost impossible at this time to arrive at a certain conclusion; it is at best a matter of probabilities and impressions. While therefore we do not advance our own opinion in opposition to that of scientific gentlemen, like Drs. McREE and TOGNO, we are free to acknowledge that in the absence of more conclusive proof, we prefer remaining under our original belief. The question has

WE received a letter very recently from a

been narrowed down to two points,—the *Isabella* is either a North Carolina or a foreign production; no other State can lay claim to it; we therefore trust that Northern writers will hereafter remember this fact and not locate this vine at different points in the Union as heretofore.

For our own part we do not see why good wines should not be made in this State, and become in time a profitable pursuit. Certainly we wish our esteemed friend, Dr. Toano a full realization of his hopes, and a lucrative return for his labors at Diccoteaux, which now presents in its improved cultivation, a striking contrast to its original wildness and unfruitfulness.

DICCOTEAUX, Nov. 1st, 1851.

MR. BURE—*Dear Sir*:—In answer to the letter of your friend, Mr. J. M. Rose, of Fayetteville, N. C. communicated to me this day by you, I may briefly state for his edification and his Ohio friend, that his queries, like many historical problems, are not easily settled, owing to the blunders, and confusion worse confounded, of the writers in the various Northern periodicals that have taken upon themselves to solve this moot-point.

"Who if they once grow fond of an opinion,
They call it honor, honesty, and faith,
And sooner part with life than let it go."

ROSE.

There is no doubt that the Skoupernong—Indian Sweet Water—is a native of the eastern portion of the State of North Carolina, and it is found wild in this region, as well as a purple variety commonly called with us Bullus.

The Catawba, as its name designates, is also a native of this State, and it is to this day to be found wild on the Catawba river in Lincoln county, and all over that neighborhood. I believe that it is from this locality that Mr. Adlum first obtained it in 1820, or thereabouts, and successfully cultivated it near Georgetown, D. C. Mr. N. Longworth of Cincinnati, in a letter to me, speaks of his having obtained the Catawba, that he now so

successfully and profitably cultivates in that locality, from Mr. Adlum. I obtained last winter from Senator Hawks, of Lincoln county, cuttings of the "*Lincoln Grape*," which, from the appearance of the wood is neither more nor less than a synonym for the Catawba.

The history of the so called *Isabella Grape* is not so easily compassed, owing to diversity of opinion. I have taken great trouble to investigate its history, and as yet I have only obtained some links of this broken chain.—And first, is the "*Isabella*" a native or a foreign grape? Dr. James F. McRee, of this place, whose high scientific attainments and observation in the natural sciences, imparts to his opinion and statement of facts great certainty, and his testimony is entitled to great weight in settling this first question. He states that he distinctly remembers as far back as 1810, when the Laspeyre Grape (the *Isabella* of Wm. Prince,) was sold in the market of Wilmington by Mr Laspeyre, who cultivated it in Bladen county, and that he perfectly remembers that Mr. Laspeyre had stated it to be a European variety, and not only sold it as such but it was never doubted by Dr. McRee and others, that the vine had all the characters of a European variety, and what makes it still more certain, is that even in this congenial climate it frequently rots and did rot with the first cultivation of it. Mr. N. Longworth has entered the same complaint against it to me. Dr. McRee states also, that he heard, as early as he can remember, that the said grape had been imported by Mr. Laspeyre, and that a Catalonian having seen the grape here claimed it as being a grape common in Spain, his native country. Of course Dr. McRee has never considered the grape an indigenous one; but a European, possessing, as it does, all the characters of a European grape, and none of our native grapes. This is also my own

conviction. In the whole of this neighborhood the said grape is to be found in gardens, and everywhere its origin is referred to the liberal distribution of cuttings by Mr. Laspeyre. So that Mr. Laspeyre must have planted his grape vines at least five years before he brought to this market his grapes from Bladen Co. This would carry us back to 1805, a period far anterior to all the dates of the supposed cultivation of the "*Isabella*" mentioned by Mr. Allen in Mr. Downing's *Horticulturist*.

These Northern writers doubting not, on a superficial examination of the case, at many hundred miles distance from the scene, have undertaken to settle for the good people of the State of N. C. that which even *here*, on the spot, has required the most assiduous diligence to ferret out the facts in the case; and even then, prudence and caution have caused me to be very circumspect how I came to a conclusion. So much for this first point.

And now for the history of the so-called "*Isabella*" grape.

On the authority and positive statement of Mr. R. W. Gibbs, son of Mr. R. Gibbs of this place, and the nephew of George Gibbs, after whose wife, (Mrs. *Isabella* Gibbs,) the "*Isabella*" grape was named by Wm. Prince. He states that his father, Mr. R. Gibbs, at the time he purchased Woodford plantation on Cape Fear River, in Brunswick county, N. C., found a vine planted in the garden, by the previous owner, which vine was taken up root and branch, sometime between 1810 and 1813, (he can not positively say, but he knows that it must be at this time as we shall soon see,) and sent to Col. George Gibbs who was then a merchant in New York and who resided at Brooklyn, in whose garden he planted it. Soon after (1815) the narrator Mr. R. W. Gibbs, then a boy, was sent to school at Brooklyn, and resided with his uncle 2½ years, and found the vine there in a

flourishing condition, and he helped to take care of it every winter by laying it down and covering it with earth, etc. When General Swift inhabited the same house he still found the vine, in the garden, and it is there that Mr. William Prince first saw the vine and named, and propagated it, as he himself has published.

So far so good; but still the identity of the stock sent to Brooklyn and the Laspeyre grape is not completely made out, except in their general resemblance and habits, and the still greater reason of their identity is that the "*Isabella*" had its origin in a country where the Laspeyre grape was in very great repute and was generally cultivated at that time.

Comte Odart in his celebrated work on the description and classification of the known grape vines in the world, alluding to the "*Isabella*" says: "Although the Presidents of several Vineyardist Congresses have called it excellent and have recommended its cultivation, and though the Marquis Ridolfi, a distinguished agriculturist, and director of an agricultural Institute in Tuscany has praised its supposed advantages, I still unite with many French Vineyardists, who think, like myself, that this grape, with a flat and medicinal taste, is good for nothing, neither for making wine, nor for the table. However we can not deny to it of being pretty productive.

"But there is one more recommendable, we mean the—Catawba—which is easily known by its berries very slightly red, and its taste has a peculiar and agreeable flavor, slightly vinous. In this respect it is much preferable to the "*Isabella*" which has been brought from the same country. The Catawba has appeared to me rather unproductive, and its grapes do not so easily reach their maturity as those of the stocks of this chapter, though it blooms first. Its bunches

slightly elongated, are rather fine and keep for a long time, the berries are covered with bloom which deadens its red color, they are big, round and well spaced. Its wood is of a uniform reddish brown color; its leaves large, round, curling under, and their under surface is cottony which imparts to it a white color."

Be it as it may, one of two things of this dilemma must be true; and this is an important conclusion in either case, namely: That if we suppose it a European variety it goes to prove that some kinds of European vines can be acclimated and naturalized in this country, even far North, and that many others may be found to do the same, and this holds out the hope of a successful cultivation of European kinds in this country. If, on the other hand, we consider the Isa-

bella to have originated from one of our native vines, its present improved condition give great hope of being able to improve our native stocks by long continued and careful cultivation.

I do not come to this conclusion from one or two isolated facts; but from the knowledge of eye witnesses and undeniable documents. A solitary fact here and there, without connection would only lead us into error as was the case with Mr. Allen, in the Horticulturist noticed by you. It is only by a continuous series and combination of facts that we can possibly arrive at the truth of any thing. I have tried my best to obtain the truth of this case. I am convinced that the related facts are entirely satisfactory.

Your Friend, JOSEPH TOGNO.
Wilmington, Vine-Dresser Model School.

GRAPE SEEDLINGS—THEIR TREATMENT.

St. Louis Co., Mo., Jan. 5, 1852.

DR. J. A. WARDER:

Dear Sir—In reply to your letter of the 6th of December, I remark that I am not particularly interested in wine cultivation; my business is that of the nursery, in which I have been engaged for nearly fifteen years, and I might perhaps be more able to communicate in this line.

My place is not adapted to vineyard culture, so I have but few grapes. I have attempted to raise seedlings for some time past, and send you a few lines on the subject; they are at your service. As you see I am, like many other practical men, no writer, and the more so as the English language is to me a foreign one.

Very respectfully,

NS. RIEHL.

The difficulties which have to be overcome in the improvement of the cultivation of the grape for wine, are of different natures; one

of the principal obstacles seems to be the want of proper varieties. The Catawba grape, which may be considered the best for wine of all we possess, contains too much acid in proportion to the saccharine principle; this objection can not be remedied by the addition of cane sugar without injuring the quality of the wine, because cane sugar and grape sugar are bodies of different chemical composition; the addition of other articles, as for instance alcohol, is still more injurious.

The only way left open to the western cultivator, is to procure new varieties from the seed; this, most of our enlightened wine growers know—they only differ in the mode of attaining the design.

The method which is most commonly followed in raising grape seedlings, is to sow the seed in the open ground, then select the finest or most vigorous plants and set them out in rows, where they remain until they

come into bearing. Experience has now shown that these seedlings are generally inferior in quality to the Catawba, or other sorts from which the seed was taken; why such is the result, may be principally attributed to the following reasons: Besides the tendency which the grape has when grown from the seed to go back to the natural wild state, like all other varieties of cultivated fruit, it also, like the strawberry, has a tendency to become dioecious by the abortion of male or female organs in the flowers; those plants may be recognized the first season, by their luxuriant growth and longer joints, while those which will probably produce the best varieties, are of much slower growth, more delicate, and often die out in the first summer, when left exposed to the drought and scorching sun of our south-western climate. So there is no wonder why the exertions of amateurs have been attended with so little success in the production of better varieties of grapes from seed.

The production of hybrid grapes by crossing our native kinds with the European species, is a very uncertain process; the flower is formed in such a way as to make it very difficult to decide, whether the pistil is not already impregnated by the surrounding anthers, and it is very doubtful, whether there is yet one true hybrid grape in cultivation. Although it is not impossible that such hybrids may be produced, but we may be certain that the great number and very different varieties of the European grapes, are varieties of one and the same botanical species, and not hybrids. So we have all reason to hope that by starting with our native grapes, we may be able to produce sorts, just as different and excellent, either for table or wine, as those of Europe are, without resorting to crossing the different species.

The seeds should be selected from grapes

of the greatest perfection in every respect, large, fine bunches, and perfectly ripe, of the sort which the experimenter thinks most proper, probably Catawba, they should be sown as soon as washed from the grapes, in four inch pots, in rich mold, not too thick, and covered about one-fourth of an inch with the same soil, these pots are to be kept always moist and wintered in a conservatory or pit or any other similar place, until spring when almost every grain will vegetate, they are then treated like other tender seedlings, they require plenty of light, and as much air as the weather will allow. From May or June they require protection from the sun.

The weaker plants should never be pulled out for the purpose of thinning. I would rather cut off close to the ground some of the most vigorous, if thinning should appear indispensable. If the young plants grow well they may be shifted two or three times into larger pots, being careful not to break the ball of earth nor let the rootlets become dry. Some time in winter when the seedlings are in the house again and have lost their leaves, they should be taken out of their pots and planted separately in pots corresponding to the size of their roots. Should their number be larger than I might wish to keep I would select the *moderate growers* with their *short wood* and reject the longer and thinner ones. The second year or summer, two shiftings may again be necessary, and if well attended to they may be strong enough to be planted in the open ground in the spring of the third year. Staking, mulching and perhaps shading will be necessary at first, but after being established they may be treated like other vines in the vineyard.

In the fall of the fifth year, most of those seedlings will bear fruit and a number of them will give certain evidence of being inferior and poor which may be then discarded, the doubtful and promising ones should be

kept two or three years longer, before deciding upon their merits.

In judging the qualities of the grapes, we must not ask too many good qualities of one and the same plant, a grape may be small and tough skinned, and nevertheless, make excellent wine, and a very poor wine grape may be a delicious and beautiful table grape.

In fact the finest European table grapes, for instance the Chasselas de Fontainebleau among others is nowhere grown for wine, and the grapes which furnish the best wine like Tokay and Auvergues are never seen in market nor presented on the table when others can be had.

Nor should the experiment be made on too small a scale, the attending of four or five hundred pots does not require so much labor, they may be put under the stage in the winter when they have no leaves, and one plant of superior quality found in such a lot will amply reward the cultivator for the trouble and expense.

The wintering of grape seedlings and their nursing in the greenhouse does not render them more delicate than they naturally are, and whoever attempts to raise them in the climate of St. Louis will find a similar course necessary to insure success.

HEDGES—A NEW PLAN.—QUERIES.

MR. EDITOR—In looking over the December number of the *Horticultural Review*, I see that our farmers and others are taking a lively interest in hedge-growing. Much has been said on the subject; but I think there is a little room yet left, which, if rightly filled, may benefit the above class, for whose instruction I venture to offer the following remarks: —

The first and primary object, in making a live fence or hedge, is, the preparing of the soil for the reception of the plants: The ground or line on which the hedge is to be planted, ought to be trenched, from 18 to 24 inches deep, and three feet wide—at the same time working in a little well-rotted manure, which will add much to the growth of the plants the first and second years. When the ground is thus prepared, the plants may be set in a straight line, in the center of the space trenched, leaving 18 inches on each side, which should be kept clean and free from weeds for two years. Having planted them four feet apart, they should not be meddled with until the fall of the second year after planting; by that time they will

have made a strong growth of six or seven feet. Then these shoots must be laid down and pegged close to the ground, one after the other, and so on, laid alternately, forming the base two feet wide, which I consider sufficient for the beginning, as, after the first and second clipping, it will have gained three inches more, when they must be kept at that, being wide enough for any hedge of Osage Orange.

It is well known by every man who has had experience in hedging, or any knowledge of the Osage Orange, that when laid down and pegged close to the ground, it will throw up shoots from nearly all the eyes on each shoot so pegged down, and will be so strong as to make a growth of six feet the same season, if done in the spring, and a closer and better hedge than if the plants had been set only three inches apart, and allowed to grow upright. The advantage of pegging down, is, in the first place, you will have three rows of shoots forming the bottom of the hedge instead of one, if grown upright; in the second place, you can make 500 yards of a line with the same number of plants

that it takes to plant 100 in the way now practiced in this vicinity and other places; in the third and last place, you will have, on the lowest calculation, 500 per cent. of money and labor saved in the operation; and, what is better than all, you obtain a good, close and lasting hedge—so close, even as not to permit a rat to pass through. The first clipping ought to be done in the first week of the month of July following the pegging, at 18 inches high—the next in September, one foot above the first; thus forming a hedge two and a half feet high, and two feet four inches broad, in one season.

Objections have been made, by some, to the Osage Orange. I maintain that it is the only good thing known and fit for hedges in this country. Any other plants offered as a substitute, I consider worse than useless; and probably when Mr. MARSHAL raises a better stock of the Osage Orange than he has got now, he may be of the same way of thinking. I believe he must have been laboring under a mistake, with regard to the tap-roots of his plants; they must have been the superficial roots that he cut, which do not injure the plants so much as the cutting of the tap-root. Should he pursue his course a little while in cutting the tap-root, (if it be the tap-root he cut,) it will save him much trouble in clipping, and it is doubtful whether his hedge will not disappear altogether, in a short time. Should he prepare his ground as above directed, before planting, he will have all tap-roots, and no superficial roots to hurt his crops. The cost of clipping a well-grown hedge, five feet high, yearly, is trifling, as a handy man, with a good plasher, can, with ease, clip a mile in one day.

Mr. MARSHAL's remarks on tap-roots, and Mr. BARRY's on fruit trees grown in this country and portions of Europe, very nearly correspond, when he says, that an orchard of fruit trees in this country, even when well

attended, does not require as much labor in five years as it does in one year in the greater portion of Europe. Now every practical gardener knows, that an orchard of fruit trees, if it gets the labor and treatment it requires, must be precisely the same in this country as in Europe. It is true, that the planting of an orchard of fruit trees in Europe is generally attended with a good deal of hard labor; but when done, it is done right. Europeans never think of making little holes in a grass field to stick their fruit trees into, to catch the winter rains to rot the roots of the trees, as is very often done in this country, particularly in the State of Ohio. Hence the trouble and labor of having to plant over and over again, instead of the one planting done in Great Britain and Ireland. Mr. BARRY also adds, that a single peach tree in England or France receives more actual hard labor in one season than an orchard of one hundred trees of the same in western New York. I must be allowed to question that statement—as every good cultivator of fruit trees will say, and must admit, that a peach tree, (I mean a standard,) requires the same handling in every country, and in every clime. But in this country, (or I might confine myself to the portion of it with which I am best acquainted,) I see the peach trees are generally let run from the time of planting to the time of rooting out, which is not a very long period, without ever having a shoot shortened on it—consequently, it will run out in the course of five or six years, particularly if there is a couple of crops of fruit gathered off it; whereas, peach trees can be seen in England, trained up to the walls, fifteen years old, and furnished with limbs from the bottom to the top, bearing fruit every year. It is true, there is a little extra trouble in training wall trees; but the crops of fruit gathered off those trees will counterbalance the labor. He also states,

that it is almost impossible to save a crop of fruit from the ravages of the birds, they are so very numerous. That is all very true, of the smooth-skinned fruit; but you can buy as much net as will cover a wall 100 feet long and 12 feet high for two dollars, and will last, with care, for five years, which will preserve the fruit, and, besides, will answer to cover the peach in the spring, and preserve or secure the blossoms from the late frosts; and where the birds are numerous the *curculio* is not known. I know of no greater indication of civilization than great flocks of birds in a country. In Great Britain, in particular, the birds are as well protected as life and property.

J. McFADDEN.

P. S. I have never failed to grow and flower Anemones well, nearly all the varieties now in cultivation, in good, rich, fresh loam, one-third good leaf mold, opening drills one inch deep, strewing a little fine sand in the drill before planting the roots, close up, rake fine. Plant in October or March, southern aspect, or nearly so, covering the beds with leaves until the frosts disappear.

Rural, O., Jan. 7, 1852.

DR. WARDER:

Sir—I have examined several interesting articles on hedging. As there appears to be some failures in this improvement, it is important that we have all the information that can be obtained upon the subject. I visited Fort Towson, in the spring of 1842, at which time I had never seen or heard of the Osage Orange hedges. On examining the tree, I became satisfied it would make the best hedge plant that I had ever seen, if it would stand our climate. I could obtain only a few seeds, and I procured some sprouts and planted them in a half barrel, with their native soil, and sent them to Belmont county, O., and

had the barrel set in the ground with the growing plants; they stood the climate well. I have got 66 rods of hedge set out, eight inches apart, in a single row; it is now two years old. I am now satisfied that they are too close, and would not set them nearer than 15 to 18 inches. I can not say what the expense of trimming will be, after the hedge is four to ten years old. If we fail with the Osage Orange in our climate, I am satisfied that we may give up hedging. From the examination I have made of its growth in its natural state, I do not fear its sprouting or spreading out from the hedge, as the roots are inclined to go down into the ground, and not to run on the surface. I found its native soil low, alluvial, river bottom land. I have seen the trees twenty inches in diameter, but not inclined to run up as high as other timber. I did not find any of it out on the high lands.

I have been almost discouraged with the seed. From one pint of seed, bought three years ago, of Dair & Co., I raised the plants that set more than 50 rods of my hedge. I have since planted one gallon, and none grew. I will try again this spring, if I can procure seed.

ALEXANDER SMITH.

Cynthiana, Ky.

DR. JOHN A. WARDER:

Dear Sir—Having been informed that you could give me all necessary directions upon the subject of planting the Osage Orange, I have taken the liberty to address you upon that subject.

My plants are now from one to two and a half feet in height, and will, no doubt, yet grow considerably before frost. We are about one degree south of Cincinnati, and, having had success always by planting small trees in the fall, I desire to know your views

upon the season of planting. If set in the fall, should they be cut off at the ground?

Respectfully yours, ROBERT JONES.

[I am sorry that this letter should have been overlooked so long, but embrace the present late opportunity of laying the queries before the readers of the *Review*. Hedges are generally planted in the spring; and many arguments may be adduced in favor of this period; but the question is to be decided upon general principles—especially during mild winters, the advantages of fall planting will be apparent, as the growth will be better the first season; in this case the tops had better be left on till spring, except that it is much more convenient to handle and set the plants without them.

I feel constrained to say, that I do not approve of the plan for hedging suggested by the correspondent above—it is carrying my own anti-crowding ideas to an extreme which is not a little remarkable, in a person who has been accustomed to see the thorn quicks set but a few inches apart.

In theory, the idea is a good one; but the buds will not all break and send up such strong canes as the writer anticipates. His strong attachment to the *institutions* of the mother country—boya, birds, blights, mildews, bugs, slugs, and all—is very pretty; but I think he misapprehends Mr. BARRY's remark, the truth of which no one can doubt, who has observed the flourishing, and at the same time comparatively neglected orchards to which he refers. Our more favorable climate and fertile soil, can not fail to make fruit-growing a simpler, easier, cheaper, and more profitable business here than in Great Britain. No sensible man, nor good gardener will advocate neglect, however, nor assert that proper attention to fruit-trees will not pay in this country. So also shall we be richly awarded for our kind protection to the

feathered tribes, which are truly the companions of man, always increasing in proportion to the advances of civilization, except in the vicinity of great cities.

Mr. McFADDEN does not say that he has succeeded with Anemones, here in the West. If he do, let us hope to see some of the flowers upon our horticultural tables this year.

Mr. SMITH coincides in opinion with the first writer as to the disadvantages of crowding the plants, taking, however, a medium distance. So also as to the downward tendency of the roots, which is so great, wherever the soil will admit, that Mr. MARSHALL need not apprehend the fulfillment of the prophecy as to the extinction of his hedge.

We have a prospect of good seed this year, and in large quantities; what was sold in this city last year was generally excellent, and gave entire satisfaction. Always purchase new seed, such as feels cold to the hand, and looks bright; prepare it properly, plant in the right soil, and you will not often fail.—ED.]

LETTER FROM ILLINOIS.

Galesburg, Knox Co., Ill.,

Dec. 15, 1851.

DEAR DOCTOR:—Our mutual friend, J. A. Kennicott, at the Pomological Convention, at Princeton, said, "You must write for the *Horticultural Review*." I shall not promise that I will, neither will I say I shall not, and only now give you substantial aid (\$3 00) for the present volume of your (or it should be our, *i. e.*, the Horticulturists and Pomologists) *Horticultural Review*. I have taken, and shall probably continue to take, eastern works on pomology and horticulture; but we want something (and must have it too) more decidedly *western* in its character, than any work published in the East.

The great desideratum in such works, is the practical—that which can be seen and felt. But for an editor to send forth a work which

would be nearly or wholly practical, he must have a great many fact-gatherers, in the shape of correspondents, to aid him; for it would be impossible, nor should we expect to find any one man who has had the necessary experience to conduct a work composed exclusively of facts.

I will endeavor to do something for you, by procuring some subscribers to the Review. I will write to some—others I will attend to personally. * * * You will have my best wishes. This region of country is new, comparatively, and it is an up-hill business to obtain subscribers even to our Prairie Farmer; but you have commenced a work much needed, and I for one will try to sustain you.

Some queries were proposed for your consideration last May or June, by a firm who hailed from Millersburg, Mercer Co., which have never been wholly answered. Your article on Hedging, in a subsequent number, covered a part of the ground perhaps. But I should be pleased to receive a communication from you about this hedging matter with the Maclura, and with particular regard to its being made into a *practical, cheap, and durable* fence for "the million."

Some millions of plants have been sold in this region, and I fear that most of those I have seen will never make a good hedge. It has been represented to those who purchased plants, that it was only necessary to plant them out—work them well—and in two or three years at most, they would have a hedge at once impassable and enduring as the hills. Your article, above referred to, gives a different, and to me a much more reasonable version of the matter.

A question or so now, if you please. What is the full cost of a hedge of the Maclura, as you would make them? What is the annual cost of pruning or shearing, after the hedge is fully grown? I have reference to a

good farm hedge. If I can ascertain it will make a good, cheap, practicable, and durable fence, I would try and raise some plants; but I wish to know what can be done, before I do much with it. I have removed to this place, intending to commence a nursery here, and to make it my future business.

I feel somewhat encouraged, when keen-eyed politicians, like Mr. Douglass and Fillmore, take the matter in hand; and I hope that something may yet be done for poor, *suffering Agriculture*, and the flowers thereof—*Horticulture*—by establishing with an Agricultural Bureau, a Model Farm and Garden, at Washington, from which light, knowledge, and science may radiate and be diffused among the backbone of the nation.

Respectfully yours, ALVAH WILLIAMS.

[Mr. Williams gives an earnest that he can and will write, and in the right way too. Let him go on, he shall be welcome. His queries have already been answered so far as my information will allow; but some of the readers of the Review may be induced to give the facts in detail. My testimony has already been rendered in favor of the *Maclura aurantiaca*.

A communication in this number sets the shearing at a mile a day. This I think quite too much for any man to do tolerably well; though with a strong and sharp instrument, made something like a grass hook, an active hand can slash off the protruding branches very rapidly. The shears are not at all recommended for this operation.]

Agricultural Education.

The Agricultural Department of the University of Albany, N. Y., has been opened under the instruction of learned Professors: James Hall, lectures on Geology; John P. Norton, on Scientific and Practical Agriculture; Henry Goadby, on Entomology; Prof. Cook, on Elementary Chemistry.

LETTER FROM MOBILE.

December, 1851.

DR. JOHN. A. WARDER:

Dear Sir—I have had the pleasure of receiving your letter of the 12th ult., also the number of the Review to which it refers, and for which I thank you. The work seems well calculated for usefulness in your latitude. * * * I cultivate nothing but the Scuppernong grape and the Orange. I have sent the Scuppernong grape to Mr. Longworth of your city, which I suppose he is cultivating under glass, and I hope with success, for really it is worth all other varieties put together. I hope to send you a few bottles of wine made from this grape, which will, I believe, change the opinion of your distinguished fellow citizen, Mr. Longworth, of the worth of the Scuppernong grape, and its capability for wine making, or lessen the value of his opinions, in relation to it, with the public.

Very respectfully, CHESTER ROOT.

REMARKS.—This grape grows well with us, but has not yet given any satisfactory results in its favor, and we are prejudiced against it

by the description even of some of its admirers; but I shall welcome the proffered wine, which may be sent by Express, at my own cost. The specimens we have already received from North Carolina, are too highly charged with extraneous sugar and alcohol, to be favorably considered by our wine committees.

The reader is referred to an article by Mr. Longworth, on page 243; and also to that from J. Tognio, on page 225, in which opposite views are expressed upon the same subject.

I must be allowed to embrace this opportunity to urge horticulturists in the South, to favor the readers of the Review with more frequent communications upon their objects of culture. They abound in natural interest, and their spring, at least, is a most delightful season of flowers. Mr. Root, or some other southern subscriber, is therefore politely requested to send me papers on the Orange culture, Grape growing, Meteorological phenomena, or other kindred topics, which will be thankfully received.

DR. WARDER—I should judge the Catawba grape is not much cultivated in the vicinity of New York, or Mr. DOWNING would not, in his Book of Fruits of America, say, that the Catawba and Isabella so closely resemble each other, that it is difficult to distinguish the two, except in the color and shape of the fruit. The Catawba has a strong, musca-

dine flavor, which is retained when converted into wine, brandy, or vinegar. I discover none, or but little of this flavor in the Isabella, and the greatest objection against it as a wine grape, is its want of flavor. To obviate this, a small portion of must of Minor's Seedling Fox is sometimes added.

A VINE-DRESSER.

THE EFFECTS OF THE COLD.

I have made considerable inquiry as to the condition of the fruit buds. Many persons think that no degree of cold will injure the peach buds if it do not follow a

period of mild weather that has started the sap. An examination of the peach buds in the city, on the 26th of January, shows that a very large proportion are killed.

FROST-WORK SCENE.

BY REV. D. A. REED. ©

AWAKE! awake! the sun is up;
 Awake and sally forth;
 We've had a rain of jewelry,
 From out the frozen north.

The earth is robed in dazzling white—
 Each tree is hung with gems,
 And diamonds in ten thousand shapes.
 Are hanging from their stems.

Each bush and every humble shrub,
 With precious stones is strung;
 And all the purest, brightest things,
 By handfuls round are flung.

The emerald and the amethyst,
 The topazes, behold;
 And here and there a ruby red,
 Is sparkling in the cold.

The crysolite and jasper see,
 And that bright Sardine stone,
 The holy Patmos prophet saw,
 Upon the heavenly throne.

Here all the gold of Ophir shines,
 With all Golconda's store;
 And who could ever number up,
 The countless myriads more!

The holly in its darkest green,
 With crimson fruit looks gay,
 Encased in solid silver too;
 How rich is its display.

In green and gold, the shaggy pine
 Seems almost in a blaze,
 With all the sun's reflected light,
 Yet softened to the gaze.

The beech tree stands in rich array,
 Of long and shining threads,
 Its brittle boughs all bending low
 To earth their drooping heads.

The lofty oak—the hundred limbed
 Briareus of the trees—
 Spreads out his pond'rous icy arms,
 Loud cracking in the breeze;

And, as the roused-up lion shakes
 The dew drops from his mane,
 So the huge woodland monarch sheds
 His crystals o'er the plain.

But time would fail, to tell of all
 That bright and starry host,
 The world to blanche, the north wind brings
 Forth from his realms of frost.

—

THE trees and shrubbery at Rochester, for the last few days, have hung with all the varied appearance so beautifully portrayed by the poet, in his "Frost-Work Scene." I send it for you to place in your columns, if you see fit.

J. H. W.

OHIO STATE BOARD OF AGRICULTURE.

THE following information is obtained from the editorial columns of the last number of the *Ohio Cultivator*:

At the meeting on the 7th ult., Dr. A. Watts, of Chillicothe, was elected President of the Board for the current year. The Executive Committee will consist of Messrs. Watts, Sullivant and Case. The appointment of a Corresponding Secretary, we understand, was deferred; and it was deemed that the funds of the Board would not admit of any further expenditure, at present, for chemical analyses.

Mr. Case presented to the Board subscriptions of the citizens of Cleveland for \$3,000, the sum required, toward the expenses of the next State Fair, which will be held there in September.

The list of premiums was made out, for the State Fair, to be published in the annual report.

The proposed exhibition and trial of Reaping and Mowing Machines, was approved by the Board, and arrangements for its management will be made by the Executive Committee.

INDIANA STATE BOARD OF AGRICULTURE.

THIS body held its second annual meeting on the 8th of January, at Indianapolis, where the delegates from county societies were in attendance, and were considered for the time-being, members of the Board, aiding and participating in the deliberations of the body, and, as their especial business, they elected persons to fill the vacancies which had occurred in the Board by statutory limitation of their term of office.

Governor WRIGHT, the President, opened the meeting, when the following gentlemen responded as their several counties were called:

From the County of Allen,	Mr. Nelson,
" Elkhart,	" Murray,
" Fayette,	" Stone,
" Hendricks,	" Singer,
" Henry,	" Grubbs,
" Knox,	" Williams,
" Laporte,	" Allen,
" Monroe,	" Bollman,
" Marion,	" Fletcher.
" Martin,	" Niblack,
" Ohio and }	" Hall
" Switzerland }	
" Park,	" Donaldson,
" Rush,	" Morgan,
" Shelby,	" Whitcomb,
" Steuben,	" M'Connell,
" Tippecanoe,	" Levering,
" Vigo,	" Durham,
" Wayne,	" Dennis,
" Gibson,	" Cochran

Reports from county societies were called for, and presented from the counties of Elkhart, Fayette, Henry, Laporte, Monroe, Marion, Morgan, Martin, Ohio and Switzerland, Parke, Putnam, Porter, Rush, St. Josephs, Tippecanoe, Hendricks, Vigo and Wayne. Two communications from Gen. Joseph Orr, of Laporte county, and one from Mr. R. Hull, of Fayette county, were presented by the President, who also laid before the Board various reports, documents,

etc., relating to agriculture, from the States of New York, Michigan and Ohio.

Among the various suggestions offered, a few may be noted:

On motion of Mr. Levering, a committee of three was appointed to find out what amendments the present law for the encouragement of Agriculture requires, and to report such amendments to this Board.

Messrs. Levering, Holloway, and Nelson were appointed.

On motion of Mr. Dennis,

Resolved, That the Legislature be requested to amend the act for the encouragement of Agriculture, so that all regularly organized Horticultural Societies within the State, be placed on the same footing as the county Agricultural Societies.

This is but justice to such associations, and it is to be hoped that the Ohio Legislature will take note and do likewise, as some of our State Board have promised, to secure for us Horticulturists an equal representation in the conventions, which meet on the first Wednesday in December.

On motion of Mr. Holloway,

Resolved, That an executive committee of three, be appointed, of which the President shall be chairman, to determine the time and place of holding the State Fair, with full powers to offer and award premiums under the law of 1851, for the promotion of Agriculture.

This committee will have the greatest labor to perform, and it is fortunate for the people of our sister state that they have secured the services of so energetic a man for chairman of this working section of the Board, upon whom, with his excellent associates, will devolve the whole responsibility of the fair.

On motion of Mr. Steele,

Resolved, That the committee on the Agricultural law inquire into the expediency of so amending that law, that the Assessors shall take down the numbers of stock; acres

of oats, wheat, corn, rye, barley, flax, hemp, potatoes, broom-corn, and vineyards, and of produce per acre.

Gov. Wright offered the following:

Resolved, That the State Board, in their report to the Legislature, be requested to ask an appropriation of two thousand dollars to the Board of Agriculture during this year.

This resolution was ably supported by the Governor with his usual happy manner, in which he exercises so much judicious tact as to be irresistible—indeed, I do not see how the Legislature can hesitate a moment upon the moderate appropriation asked. Among others who ably advocated the measure, was W. T. Dennis, who suggested “that the benefits arising from what had already been done under the act of last winter, were great; and from these it could be clearly deduced that the State, looking to the question of taxation alone, ought not to hesitate in giving the sum contemplated by the resolution of the Governor. The increased amount of property presented for taxation would far more than repay this loan. Within the past year, more than ten thousand dollars worth of valuable stock had been brought into Wayne county; a result of her fair.

The resolution was unanimously adopted.

It was resolved that proposals should be made to the several towns that wished the Fair, and that it should be held where the highest bids were made towards defraying the expenses, if the executive committee should decide that the local advantages of the place would justify such a location.

The following gentlemen were duly elected: Messrs. M'Bride, G. W. Brown, Jacob R. Harris, John McMahan, Gen. Steele, Gen. J. Orr, — Seward, and G. G. Dunn, to hold their office for two years, who, with Messrs. J. A. Wright, Alexander Stevenson, Roland Williard, David P. Holloway, Thomas W.

Swinney, John B. Kelly, Wm. McLain, and George Hussey, holding over, for one year, constitute the Board of Agriculture for the State of Indiana; a large and respectable body of influential citizens.

Gov. Wright offered the following:

Resolved, That the Executive Committee be instructed in awarding premiums to make a portion of them in silver cups, a portion in money, a portion in books, and a portion in diplomas and certificates.

This was ably and urgently supported by the mover, who referred very handsomely to the good effects that he had observed to flow from a similar course in other States. Several amendments were offered by other members, some of whom supposed that the people would prefer money, one gentleman suggested that a part of the premiums should be improved agricultural implements, made within the State, another proposed that the successful candidates should be allowed the privilege of electing for themselves the cups or the money. The resolution was finally adopted in its original form—with the restriction only as to plate, which was limited to five hundred dollars.

Mr. Bollman offered some resolutions, the object of which was to secure to the farmers and especially to the County Agricultural Societies, copies of the Patent Office Reports, and collections of seeds, etc., from the Agricultural Department at Washington, which he proposed to effect by a correspondence to be conducted by the State Board—also to establish a State Bureau of Agriculture for the collection, distribution and interchange of agricultural implements, seeds and plants.

This very feasible proposition, was ably supported but it also met with disfavor, probably through a misapprehension of its true bearing. The president took the floor in the opposition, but it appeared to me that he only desired to assert the importance and

advantages to the State which would accrue so much more directly by establishing in its own capital a *Bureau of Agriculture*, in which the contributions of knowledge, the statistics and specimen products of her soil should be concentrated, thence to be re-issued for the benefit of her own citizens and the world—and upon which the central government should draw for information respecting the resources of this State instead of our being obliged, as now, to look first to the Patent Office Reports for information respecting the matters of interest around us. The sterling State pride of the Governor, will, I doubt not, do much, with his energy and devotion to the cause, towards building up just such a local Bureau of Agriculture, as each of our States should have, as one of the results of the Boards of Agriculture established.

On motion of Mr. Singer, it was resolved, that the board in their report to the Legislature, urge upon their attention the necessity for more stringent enactments for the protection of Orchards, Vineyards, and other crops liable to molestation by trespassers.

And by the same, that this Board appoint a committee to take into consideration the propriety of suggesting some feasible plan for the establishment of an Agricultural School.

On motion of Mr. Stevenson, and as amended on motion of Mr. Fletcher, the Executive Committee were authorized to adopt rules for the management of the State Fair, and the President of the Board was authorized to fill vacancies that may occur in the committee.

On motion of Mr. Williams, the Executive Committee was instructed to take charge of all matters not otherwise referred.

On motion of Mr. Dennis, it was resolved, that a committee of three be appointed by the President, who shall visit the Fairs of other States for the purpose of a friendly interchange of civilities, and for examining such new varieties of stock, implements, machinery, etc., as they may deem worthy of consideration, together with such details, as, in their opinion, would subserve the interests

of this Society, and report to the next annual meeting of the Board.

A very interesting communication from Mr. Levering, of Tippecanoe, was taken up and read, after which the Board resolved itself into a committee of the whole to discuss the utility and best mode of draining lands.

Mr. Morgan, of Rush, Mr. Whitcomb and Mr. Brown, of Shelby, warmly advocated its merits. They all concurred in the opinion that the land thus reclaimed was far better than any other.

This subject is one of very great interest to the State of Indiana, and, indeed, to large portions of this great valley, where the rock-strata are so little inclined, and where much of the soil is so flat, as to need artificial drainage; indeed, almost all of our clayey lands will be much benefited by thorough ditching, even for grass, and it will no doubt be advocated more and more as the beneficial results come to be observed. Various economical plans were suggested for effecting under-drainage with wood, some of which had been found to last a great many years without decay.

The committee recommended a premium of \$25 to be given for the best essay on this subject.

Mr. Stevenson moved that the Committee on Premiums be instructed to offer \$25 for the best plan of a dwelling; \$25 for the best plan of a barn; with specifications for each, and \$25 for the best essay on rendering useful the hill lands of the State.

Mr. Murray moved to amend the first of these clauses, so as to require three plans of houses to be given, one costing not over \$500; one not over \$750; and one costing not less than \$1,000, so as to adapt them to the advantage of a greater number of the citizens, and to those of moderate means, to whom, indeed, he very judiciously observed, they promised to be most desirable.

Several members spoke on this subject. All coincided in their views as to the necessity of effecting a change in the present mode of building. It was, however, deemed best to leave the whole matter to the committee, as, doubtless, in awarding the premium, they would give it to such plan as was most likely to prove of general advantage. Under this expression, the amendment was withdrawn, and the original motion prevailed.

Mr. Nelson submitted the following:

Resolved, That each member of this Board be requested to use his influence in extending the circulation of the *Indiana Farmer*, by subscribing for it himself, and using his influence in inducing others to do likewise.

Several members spoke on this resolution, all concurred in the propriety of recognizing this publication worthy to be regarded as the State Agricultural Paper, and advising that the County Societies adopt measures for giving it an efficient and zealous support. Mr. Holloway, one of its editors, stated that it was intended as a medium through which the actual farmers of the State could communicate the results of their observations and experience to each other, and that theoretical farming, which had no other existence than in the brain of the writers, would be excluded from its pages.

The resolution was unanimously adopted.

On motion of Mr. Holloway, it was resolved, that the thanks of this State Board be, and they are hereby tendered to the Presidents and Executive Committees of the Agricultural Fairs of the States of New York and of Ohio, for inviting the President of our State Board to attend their Great Fairs of 1851, and their kind and courteous attention to him during his visit, and for the valuable Reports presented to this Board; in return, we hereby instruct our President to invite the executive officers of the States of New York and Ohio to attend our State Fair next Fall.

Which was unanimously adopted.

Mr. Dennis submitted the following:

Resolved, That the Board earnestly recommend to the Pomelogists, Horticulturists, and Farmers of this State, a cordial support of the *Western Horticultural Review*, published at Cincinnati, Ohio, as a very able and valuable work, and the only one of this character published in the West.

Which resolution was unanimously adopted, and elicited a response from the Editor, who was politely invited to express his views upon the connection of Horticulture and Agriculture. He now takes pleasure in acknowledging the many civilities that were so handsomely extended to him by the members, to whom he was a stranger, and for the first time setting foot upon the soil of this great State, as their guest.

The many agreeable acquaintances formed during the sessions of this Board will be long remembered, and cherished as additional links forged with the great family of man, to which he is connected.

To those prominently connected with Agricultural Societies, and to Gentlemen of the Press, he is under great obligations, not only for passing civilities, but also for promised aid in the means of presenting himself to the people of Indiana, who are advancing on the highway of civilization, and beginning to appreciate the beautiful of Horticulture with the useful of Agriculture.

Before putting the question to adjourn, the President addressed the members, congratulating them on the strong evidences exhibited of the utility of the law which gave existence to the Board, and to those County Associations so rapidly forming over the whole State. These were its first beginnings, and its future usefulness could easily be seen in them. That their efforts would be cordially responded to by the General Assembly and the people, he did not doubt; for all had one object in view, the honor and prosperity of the State itself.

BUFFALO HORTICULTURAL SOCIETY.

THE annual meeting was held on the 6th of January, Vice President Bryant presiding.—The following officers and standing committees were elected for the ensuing year:

President—ABNER BRYANT, (Mr. Hodge declining.)

1st. Vice President—CHAS. TAINTOR.

2nd Vice President—WARREN GRANGER.

Treasurer—AUSTIN A. HOWARD.

Corresponding Secretary—WILLIAM R. COPPOCK.

Recording Secretary—JOHN B. EATON.

Committee on Fruit and Fruit Trees—Benjamin Hodge, Chas. Taintor, George F. Pratt, Jos. G. Masten, Warren Granger.

Committee on Flowers and Flowering Plants—Wm. R. Coppock, Jas. W. Brown, Isaac F. Bryant, Elijah Ford, Amasa Mason.

Committee on Vegetables—Jason Sexton, H. W. Rogers, Jno. R. Prince, Joseph Dart, Orlando Allen.

Committee on Entomology and Manures—Lewis F. Allen, William Treat, S. Z. Haven.

Council—Abner Bryant, Charles Taintor, Warren Granger, Austin A. Howard, John B. Eaton, Benjamin Hodge, William R. Coppock, Jason Sexton, Lewis F. Allen.

The Society will hold its semi-annual exhibition on the 22d and 23rd of June, and the annual exhibition on the 14th and 15th of September.

Jno. B. EATON, Rec. Sec'y.

Semi-monthly meetings will be held during the season, to award premiums, of which you shall have the reports.

[Thank you.—Ed.]

THE CINCINNATI HORTICULTURAL SOCIETY.

THIS Association held its annual election on the first Saturday in the year, when the reports of the financial officers were rendered and ordered to be filed.

The Committee on Constitution reported sundry changes and amendments, which were laid over to the next monthly meeting, when they will be discussed, and their adoption brought to a vote.

A communication was read from Thomas P. James, Secretary of the Pennsylvania Horticultural Society, stating that their annual exhibition would be held on the 15th, 16th and 17th days of September, of the present year.—Also, offering interchanges of civility.

The President made a touching valedictory, and then stated that the polls were about to be opened, appointed as tellers, M. Kelly and J. Gilmore.

On counting the ballots, the following persons were declared duly elected:

President—STEPHEN MOSHER.

Vice Presidents—N. B. Shaler, W. S. Hatch, Jacob Hoffner.

Treasurer—William Stoms.

Recording and Corresponding Secretary—John A. Warder.

Council—M. McWilliams, S. M. Carter, Jno. G. Anthony, S. S. Jackson, T. H. Yeatman, Wm. Orange, M. Kelly.

The polls were then opened for the election of other officers, as directed by the constitution, on a separate ticket.

Flower Committee—William Heaver, Jno. McFadden, I. C. Ferris, S. S. Jackson, Thos. Knott.

Fruit Committee—T. V. Peticolas, Wm. Orange, S. M. Carter, M. McWilliams, D. McAvoy.

Vegetable Committee—A. Worthington, Jacob Hoffner, Anthony Pfeiffer, Patrick Considine, R. B. Davies.

Wine Committee—J. P. Foote, J. Brace, S. Robert, L. Reh fuss, Geo. Graham.

Financial Secretary—Henry Ives.

The President closed his official duties by introducing his successor, which was done with a few pointed and happy remarks, recommending the hearty support of the members to be accorded to the new incumbent. Upon all he urged harmony as the bond of success.

Dr. Mosher, on taking the Chair, thanked the Society for their votes, and said while he should endeavor to discharge his duties, he would throw himself upon the Society;—to the members he should look for aid in governing the proceedings.

On motion of R. Buchanan, supported with appropriate remarks, the thanks of the Society were unanimously voted to the retiring President for his zeal and efficiency as an officer during his long occupancy of the important post he has just vacated.

On the 10th, a communication was received from Mr. Charles Schumann, accompanied by six bottles of wine, which were tested with the following result:

No. 1. Isabella wine, 1851, from the vineyard of Mr. Duhme. Voted that it is considered a good article of Isabella wine.

No. 3. Isabella wine, 1851, from the vineyard of John Schimer. Voted that it is inferior to No. 1, and bears a close resemblance to Claret.

No. 4. Isabella and Cape wine, 1851, from the vineyard of Mr. Charles Schumann.—Voted that it is a good wine, and closely resembles good Port.

No. 5. Isabella wine, 1851, from the vineyard of John Schimer. The same wine as No. 3, made sweet without sugar. Voted inferior to the others, and not approved.

No. 6. Sweet Catawba, 1851, from the

vineyard of Mr. Charles Schumann, made sweet by boiling with the addition of sugar and alcohol. Voted that it bears no resemblance to Catawba wine, and the admixture and treatment give it no merit.

No. 2. A bottle of foreign Claret. Voted much inferior to No.'s 1, 3 and 4.

The remainder of the wine was then referred to the Cincinnati Wine Association.

For the better regulation of the proceedings, the following resolution was adopted at a later meeting:

That all specimens of Flowers, Fruits, Wines, Vegetables, etc., presented for exhibition, shall remain upon the table until eleven o'clock, before they are distributed for examination by the several committees or others.

MEMBERS ELECTED.—Peter Melindy, Michael John Hazen, Wm. P. Neff, Wm. Cox, jr., and George Buck.

EXHIBITED.

Apples.—Rhode Island Greening, Esopus Spitzenberg, Swaar, Rawle's Janet, White Pippin, Newtown Pippin, Roxbury Russet, and another, unknown.

Seeds.—Russian Bald Barley, received from Geo. Mellus, California, referred to the Council for distribution.

American Wine Growers' Association.

THIS very promising young Society, which has a great work to perform, and which is growing in the favor of the vinters and others interested, held a spirited meeting on Saturday, January 3rd, Dr. Mosher presiding.—The minutes were read and approved.

The committee on *statistics* made a further report on behalf of the vineyards of Kentucky, which shows a great increase in the culture of the grape. Several members remarked at length upon the importance of having full statistics of the crop.

Mr. Buchanan moved that a person be

employed at a salary, to make a thorough investigation of the quantity, and to revise the lists we already have. Mr. Sleath suggested that the *Assessors*. might lend much aid.

Mr. T. H. Yeatman referred to his European trip, and suggested that his comparisons of European wines had resulted favorably to our Catawba, and urged that the statistics collected should be more full than merely a list of acres, but should embrace also an account of the mode of cultivation, fermentation, treatment, etc.

Mr. Buchanan also urged taking full statistics. On motion, Dr. Rehfuß was requested to prepare a set of questions, and to employ a suitable person who shall traverse the county in order to obtain the desired information.

The Secretary reported at some length on

behalf of Mr. Bennet, manufacturer of hydrometers, and presented his instruments for the inspection of the members: he was directed to invite Mr. Bennet to attend our next regular meeting, and to report more at length, on the first Saturday in February.

Mr. Rehfuß exhibited two specimens of wine of last vintage—one of which had been manured with silicate of potassa, and had been a heavier must; it is now clearer and generally more admired than the other produced on a rich soil and sunny exposure but without special manure.

This being the annual meeting, an election was held for officers to serve during the next year, with the following result:

President—L. H. REHFUSS.

Vice President—N. B. SHALER.

Treasurer—T. H. YEATMAN.

Secretary—JNO. A. WARDER.

DOMESTIC WINES, BY N. LONGWORTH.

To the Wine Growers' Association:

GENTLEMEN:—We did hope that we should have American wine, the pure juice of the grape, and not worse compounded than the worst wines of Europe. Here only three kinds of wine are extensively made for sale. Dry Catawba, the pure juice of that grape fully fermented. A ladies wine, generally made from the Isabella grape, which has less of the saccharine (sugar) principle, than any other grape we cultivate; by adding from $1\frac{1}{2}$ to $1\frac{3}{4}$ lbs. of loaf sugar to the gallon, the must undergoes a strong fermentation, but the saccharine principle being greater than the leaven, (fermenting principle) the latter is exhausted before transforming the whole of the sugar, and the wine continues sweet for any number of years. Our third variety is the Sparkling Catawba, (champaigne) made from that grape, after it has

undergone a full fermentation, and has a certain quantity of the best rock candy added, to give it sweetness and effervescence. The process is slow, expensive, and the loss from breakage great; and it is attended with occasional failures in accomplishing the intended object. The wine should be in the bottles two years, and have constant attention, before it is fit for transportation. Each of these wines is made from one kind of grape, and they are healthy to the stomach.

In Europe different kinds of grapes are mixed together. In Maderia, a sweet wine is made by adding one-third of brandy to two-thirds of grape juice as it comes from the press. It makes a sweet, pleasant wine, but having undergone no fermentation it is not healthy. They seldom sell it by itself as wine, but add a certain portion to their best wines, to give them aroma, flavor and richness.

But if we are to believe the reports we have read of the manner in which wine is made in North Carolina, the mixtures of Europe are thrown into the background, and the price increased the further the wine is removed from the condition of pure juice of the grape.

Our grape that has least saccharine principle makes a sweet wine, if from $1\frac{1}{2}$ to $1\frac{3}{4}$ lbs. of sugar is added to each gallon. Yet in North Carolina they tell us, that to make *Hock* wine (*Hock* is a dry or hard wine) from their famous grape, the Scuppernong, they "put full three pounds of sugar to the gallon;" and yet say that they "find great difficulty in keeping it from acidity." It is to me surprising, as they have the Catawba grape wild in their State, that they should cultivate the Scuppernong. They boast of other native grapes of fine quality, and among them the Lincoln. But they make five kinds, and strange to say, what they call their "purest Scuppernong, is made with Scuppernong brandy," and sells at \$6 per gallon. This I presume is similar to the liquid (not wine) made in Maderia, by adding one-third of brandy and preventing all fermentation.

One of their wines, called "Scuppernong Champagne," it seems is made with large quantities of spirits. They say, "no matter what kind of spirits, and one fourth spirit and one pound of sugar to the gallon." Why it is called champagne, I can not understand, as it seems it does not sparkle, and is not sold in bottles, but by the gallon. I might have added, that a sweet wine may be made by drying the grapes before pressing, or by boiling the must, or by adding to it deleterious articles to prevent fermentation. The Scuppernong grape (the black is the same as the Muscadine of the Mississippi) has, like the Fox grape, a fine aroma and flavor, but like the Fox, it has a thick skin, a hard pulp, and but little saccharine principle. My impression is, that the Scuppernong grape, by

a very large addition of sugar, will, from its high flavor, make a fine sweet wine, and none other of value. It is not suited to our soil and climate. The black Scuppernong seldom has more than from two to four berries on the bunch. The bunches of the white are rather larger. The Catawba grape, which I deem equal for wine to any foreign grape, is a native of North Carolina.

We intend, in a few years, to render portions of the Ohio river, as celebrated for its wines as the Rhine; and my desire for the extension of my life-lease, would be to aid in accomplishing this object. But there are many persons of means and talents engaged in this enterprise, and I hope not to be missed when the time arrives for my departure. I would strongly urge on all, to gather from our forests all grapes of promise, and give them a fair trial; and more especially to raise new seedlings from our best native grapes, and a cross between them and the best wine grapes of Europe. I would particularly recommend the Herbemont grape as valuable for this purpose; also the Missouri. From the Catawba, a superior wine and table grape may be produced, though I believe its seedlings will generally show a disposition to run back to the parent Fox. In naturalizing foreign grapes by long cultivation, or raising hardy grapes from the seed of foreign grapes, I have no faith.

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ADDITIONAL NOTE.—Mr. L. has probably considered the Cape and Herbemont wines as of too small an amount to be reckoned among our products; but they have their admirers, and have attracted considerable attention. Some specimens of the first have been thought to resemble Burgundy, and his own Herbemont wine compares very favorably with Sherry. The Cape is a moderate grower, and difficult of propagation by cuttings, but has its advantages, among which may be mentioned its immunity, to a great extent, from the rot. It is, however, fast disappearing from our vineyards.—ED.

STATE POMOLOGICAL SOCIETY.

A new paper has recently made its appearance, bearing the generous title of "Ohio Farmer and Mechanic's Assistant." Its approach has been noted in the advertising department, and it now appears, large, handsome, clean, and filled with valuable matter.

Among the first articles which attracted my attention, was a suggestion to form a Pomological Society. The third number contains a letter, from A. H. Ernst, upon this subject, which with the editorial comments are transferred to the pages of the Review.

Mr. Elliott, the editor, has long been actively engaged in all the public movements for the advance of fruit culture, and has also been privately pursuing these investigations for some years.

Though I can not concur entirely with the views of Mr. Elliott, I gladly second any movement that will best advance the cause, and that will bring out the hidden mines of knowledge that exist among our fruit growers.

In our first number, we took occasion to call the attention of Pomologists and fruit growers in Ohio, toward the establishment of a "State Pomological Society." Our remarks have called forth quite a number of letters, from various parts of the State, seconding our views, while at the same time censuring us slightly for insinuations derivable from our language, in reference to the past organizations of this nature. Our esteemed friend, as well as the most zealous and devoted friend of every thing which can advance Pomology in Ohio, Mr. A. H. Ernst, of Cincinnati, writes as follows:

MR. F. R. ELLIOTT:

Dear Sir—In the first number of your beautiful and interesting new paper, the

Ohio Farmer, etc., which you had the kindness to send me, I notice, among its other valuable matter, a proposition to form a State Pomological Society. After speaking of the Pomological conventions which have been held, and the favor with which their reports have been received, you say: "The past two years, no meeting has been held with the design of carrying out and completing the work of those first conventions, and apparently the matter is neglected." While I heartily approve of any plan of action, which will tend to bring Pomology into a better and more intelligible shape, I must beg to say, that I do not think the fact of no meeting having been held for the past two years, a sufficient reason for the censure of neglect, and the call for a new organization.

You will remember, at our last meeting, in 1849, in consequence of the "North American Pomological Congress" having appointed its meeting at Cincinnati for 1850, it was deemed inexpedient to hold a State meeting that year. The adjournment was consequently to the fall of 1851. The cause for no meeting at that time was not one of neglect or want of interest, but an uncontrollable act of Providence, in the entire destruction in the West of the material for deliberations. The duty of the officer charged with the call of the last named meeting, was not overlooked, but after asking for advice from the Pomologists of the State, by letter and through the columns of the Horticultural Review and Agricultural Journals, it was deemed best to let it pass, as there was nothing to act or deliberate on, to insure the attention of those interested.

I am gratified, however, to see public attention called to the subject at this early day, and hope its agitation will lead to a full and large meeting next fall. The good re-

sults, no one can doubt, who has had the least experience in fruit culture. It is by comparison alone that we know the value of a thing. Hence, a man, (and he may be very honest,) recommends a poor fruit as of the best and finest character, because he has seen no better, and he calls it after the person from whom he got it, because he is ignorant of its true name, if deserving of one.

Though the organizations for this purpose in their labors have been very imperfect, yet, the good results of their transactions have been of immense value to the country. Besides their immediate actions it has induced a spirit of inquiry everywhere; the good fruits of which will be more y tested and approved of hereafter.

Do not understand me as opposing the proposition of a State Pomological Society. I will go in for any movement that will more fully arouse public attention, and to a fuller development of this great and universal interest.

A. H. ERNST.

Regarding that in our former remarks which is termed "censure of neglect," we can only say, and we do so in justice to those officers who had charge of the call for the next Pomological Convention, that we intended no such implication. We desire a State Society, formed under Constitution and laws so controlling and governing, that the subject of fruits shall be looked after at *all seasons* of the year, as the varieties mature. We desire it so organized, that a fund may be established and yearly augmented, from which, those committees appointed from time to time to investigate the qualities of different fruits, the nature and habits of various insects that prey upon them, as well as the remedies therefor, may be enabled to carry out the requirements imposed by the Society on them, without pecuniary loss to themselves, and, also, that from this fund they may be enabled to print and distribute to the *members* of the Society such information as they may gather, and desire to make immediate reports on.

Under our past organizations little has been done except with apples, and we think mainly from the fact that our meetings were held when few other fruits could be shown.

The amalgamation of a Pomological Society with the State Board of Agriculture, we believe, is contemplated by some, if they can bring it to pass. Now we confess our impressions of the practical good resulting from such a course are any thing but favorable. Pomology requires constant labor and attention from the officers of a society established for improvement, and can not be advanced by the mere exhibitions of collections from year to year. Time nor opportunity can not then or there be given for examination and comparison. Interest in the subject, it is true, may be, and is increased, by such shows, but knowledge relative to the value of one fruit over another, or its adaptation to any particular section or soil can not there be obtained.

A State Pomological Society, acting in concert with the State Board of Agriculture, but entirely independent of such Board, we believe would be far better than any amalgamation of the two. The interest of the Cattle Breeder, his thoughts, views and feelings, are not in concert with those of the Pomologist, and he can not without deep interest in the subject, so act as to increase and diffuse pomological knowledge. Insignificant as many deem discussions on any one fruit, the returns, pecuniarily, from trees of that variety, are often immeasurably greater and more equitably distributed among the people, than the importation of any one animal. Not that we do not appreciate advantages gained from the introduction of improved breeds of animals, but that while one is a subject of daily interest to hundreds the other is one of constant and increasing interest and enjoyment to thousands; producing in the few hours given to it from their other every day pursuits, health to their bodies, tranquility to their minds, and in the language of one of our best physicians as well as horticulturists, [Kennicott] "Saves medicine and money, tends to make mankind wiser, better, happier, and more desirous of sharing the blessings which they have provided. Horticulture is a harmonizing and Christian profession—Pomology makes it a paying one."

THE FRONTISPIECE

REPRESENTS the modest mansion in Hanover Co., Virginia, where, on a balmy spring morning in the year 1777, an infant first saw the light of day, and gladdened the anxious heart of his pious father, who has since made the wide territory of our glorious country resound with his name.

This antique parsonage in the veritable "Old Dominion," nestling quietly in some secluded dell on the great eastern slope of the Blue Ridge, was the early shelter of the boy HENRY CLAY—here he first inspired the pure breath of liberty among the soul stirring days of our revolution, and inhaled the free airs of heaven that gently fanned the patriotic fires of his nature, and in which his

mind and muscles were well developed, for after service in the cause of his country. He was born in a great age—and has lived to mark his own time.

Now near the close of his brilliant career, an old man, full of honors, and obliged to leave the Counsels of State for the quiet retirements of home, it is pleasant to revive the associations of his infancy and youth, to fancy ourselves wandering among the hills and groves where he wandered, or listening to the warbling birds, the sighing winds, the babbling brooks, which excited his youthful imagination, and stored his mind with beautiful images wherewith to deck his rich eloquence that carried all hearts captive.

ACKNOWLEDGEMENTS.

To the proprietors, THORP, SMITH, HANCHETT & Co., for a Catalogue of the Syracuse Nurseries. It is quite a handsome pamphlet, in which may be found lists of all the various plants, shrubs, and fruit-trees which they cultivate so extensively and successfully in the land of salt springs.

To the Hon. L. D. CAMPBELL, I am indebted for a copy of the Patent Office Report, of last year. It is a volume containing a vast amount of useful statistical information, showing the valuable resources of our country. When will our rulers be prepared to execute the suggestions of the President,

and comply with the earnest appeals of the people, by establishing a separate department, devoted to the great interests of our rural population, an *Agricultural Bureau*? Such an establishment, under the direction of a Western man, familiar with the productions of our vast and fertile fields, and with the wants of the agriculturists, so as to secure their sympathies, would be able to effect great service in their behalf. In the mean time, many of the States are preparing the way, by building up their local Bureaus, or State Boards. But I can now only hint at this topic, and recur to it another time.

CHOICE APPLE GRAFTS.

I LEARN, by a private letter, that my friend JAS. WATTS, of Rochester, New York, is prepared to furnish grafts of all the celebrated standard fruits of New York.

He has long been a connoisseur of fruits, and has done much to bring forward several choice varieties, and among the people he is looked upon almost as the father of the celebrated *Northern Spy Apple*.

Nurserymen and amateurs may depend

upon Mr. WATTS, as one who will conscientiously execute orders that may be sent to him for scions of fruit, which he offers to furnish by Mail, or Express, as ordered, for \$1 00 per hundred (money inclosed).

CORRECTION.—Mr. W. desires me to say, that the name in the Cemetery article in the November number, should be *Myron Holley*, instead of M. Walley.

METEOROLOGICAL TABLE.

CINCINNATI, DECEMBER, 1851.

THERMOMETER.			WEATHER.			RAIN.	SNOW.	
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.			
1	32	45	clear	clear	clear	.15		
2	36	43	drizzle	cloudy	drizzle			
3	33	38	cloudy	do	cloudy			
4	28	33	clear	do	var			
5	29	32	cloudy	do	do			
6	24	44	fog, clear	clear	clear			
7	41	57	clear	do	var			
8	50	55	cloudy	cloudy	do			
9	34	43	fog, clear	var	cloudy			
10	34	38	rain	cloudy	clear	.35		
11	34	37	cloudy	do	cloudy			
12	32	38	do	do	do			
13	13	19	clear	clear	clear	.10	2.00	
14	20	39	snow	drizzle	snow			
15	10	14	clear	clear	clear			
16	-4	6	do	do	do			
17	-2	8	do	do	cloudy			
18	10	17	do	do	var			
19	10	31	do	do	cloudy			
20	15	25	do	do	clear			
21	18	20	cloudy	snow	cloudy		1.60	
22	21	28	do	cloudy	do	.35		
23	10	21	clear	clear	clear			
24	15	37	do	do	cloudy	.55		
25	35	38	fog, rain	cloudy	do			
26	25	29	fog, cl'dy	do	do			
27	31	49	cloudy	var	cl'y. rain	.85		
28	52	57	var	clear	clear			
29	38	60	fog, clear	do	do			
30	52	57	rain	rain	rain	.80		
31	38	39	do	drizzle	cloudy			

Total.....Inches, 3.15 3.60

Rain and snow water in the month, ..Inches, 3.37

Do do do in the year,31.90

Do do do mean y'ly depth, about 50.00

Snow in the year,13.65

Mean temperature of the month.....30.86°

Do do Dec. 1850.....35.17

Do do do 1849.....32.10

Do do do 1848.....42.14

Do do do 1847.....35.23

Do do do 1846.....40.57

Do do do 1845.....27.55

Do do do 1844.....40.87

Mean of Dec. in the above 8 years....35.56

Highest temp. in the year, 13 and 27 July, .98°

Lowest do do 16 Dec.4° below

Coldest day do 16 do1° above

Mean temperature of the year.....56.71

Do do of the last 11 years,55.64

REMARKS, WINDS, ETC.

- 1 Light N E.
- 2 do W, brisk W at night.
- 3 do N W, brisk at night.
- 4 Calm, light N W, calm at eve.
- 5 Light S, calm at eve.
- 6 do light S, calm, calm.
- 7 do S.
- 8 Brisk S W, and W, and N W.
- 9 Calm, light S W and S.
- 10 Light N W, calm at eve.
- 11 do S W, and W.
- 12 do do and N W.
- 13 do N W, and W.

- 14 do S E, brisk S and N W. Squall at night.
- 15 do N W, brisk N W.
- 16 do W and N W, calm at eve.
- 17 do S W, brisk W, and N W.
- 18 do W and S W, calm at eve.
- 19 do S, brisk S and W, high W at night.
- 20 Brisk W, light S W, and calm at eve.
- 21 Light E.
- 22 do N E, calm, light N, calm at night.
- 23 do N. do do
- 24 do E, S W. do do
- 25 Calm, light E and N E.
- 26 Light N E.
- 27 do S.
- 28 do S and S W.
- 29 do S.
- 30 Calm, light S, brisk S W and W, light W, equal at dawn of a few minutes.
- 31 Light N and N W.

Clear days in the month.....8
Variable, sun at times.....13
Cloudy, sun not visible.....10-31
Clear days in the year.....148
Variable do do171
Cloudy do do46-365

REMARKS.—The quantity of rain that has fallen this year is 18 inches less than usual. Several squalls, of short duration, have occurred during the year, but no storms; high winds very rare, and no notable changes at the periods of the equinoxes—striking characteristics of this midland region. Thunder on the morning of the 30th inst.

River full of ice on the 16th; firmly frozen on the 20th; and open on the 29th.

The frost on the 2d of May, appears to have been without precedent in its injurious effects on vegetation. The summer—June to September, 4 months—was the hottest and driest on my record. December 1845 was three degrees colder than December 1851.

The mean temperature in all those observations is the medium of the minimum and maximum degrees of the day.

JOHN LEA.

A COLD DAY.

Dr. RAY gives the following meteorological notes :
“ Monday, January 19th, 1852, was so remarkably cold as to be worthy of special notice. At 6 o'clock, A. M., the mercury stood at 10 degrees below zero. At 2, P. M., it stood just at zero, and at 10, P. M., at 10 degrees below zero. At 6, A. M., Jan. 20th. it stood at 12 degrees below zero. This makes the temperature of the day 7 degrees below zero. The atmosphere was unusually dense. Although the 20th was the coldest, the thermometer commenced falling.

My observations were made by the standard thermometers, and in different locations, so that I have no doubt of the temperature reported being exact; although, from the dryness of the atmosphere, the feelings did not indicate that the temperature was so low, the mean being ten degrees lower than the coldest day of December, which was then considered very severe.”

From the papers I have collected the following observations, some of which appear almost incredible :

Massillon,	—18°	Zanesville,	—27°
Cleveland,	—16—20	Lancaster,	—32
Ashtabula,	—15	Erie, Pa.,	—13
Toledo,	—20	Pittsburgh, Pa.,	—6
Sandusky,	—12	Detroit, Mich.,	—14
Newark,	—18	Chicago, Ill.,	—24
Columbus,	—14—20	Montreal, U. C.,	—14
Monroe,	—14	Quebec, L. C.,	—21
Cincinnati,	—9—20—21	Franconia, N. H.,	—25

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Pomology.

ABOUT PEARS.

DURING the past year, my attention has been frequently turned to an examination and criticism of this delicious and favorite fruit. Many opportunities have been offered for seeing and tasting them, both while absent and after my return, among the many specimens so liberally furnished by my friends, at Rochester, and elsewhere. It has therefore occurred to me, that the short observations noted down at the moment, might be worth setting in array before the reader. These notes were not the result of my own judgment alone; but whenever a specimen was to be cut, a committee of our fruit-growers was collected, so that their different opinions might be obtained, at the same time that they, too, were enabled to taste many of the specimens with which we had never before met in our previous investigations. Some old varieties are also mentioned, though familiar to all, and many others might have been added, but they have been reserved for a future occasion.

The reader is not, however, to look upon these dicta as final—the judgments may, in some instances, be reversed, when fruits properly ripened and perfected shall be presented to our committees; every allowance should

be made for those that came before us in an imperfect condition, whether from overripeness or premature gathering.

In announcing the qualities of the fruits, a few very brief expressions will be used, and no attempt will be made to describe the varieties, as every reader can obtain that kind of information from the standard works on fruits, by DOWNING, THOMAS & BARRY. The object is rather to give the impression made upon the palate at the moment, and the range of comparison is brought within very narrow limits:—*First rate*, means something that will compare with the *Virgalieu*, or Doyenné Blanc, the Seckel being beyond comparison, though a few of those tested were considered nearly equal to it, in high flavor and delicate texture. *Second rate*, is applied to those which fall below the standard assumed; and *third rate*, is applied to those which were not considered desirable for the table. Here let it be remarked that the test of these pears was that applied to them as desert fruits alone, and has no reference to their qualities for the kitchen. Other remarks are applied incidentally, as they happened to have come under notice.

- Arch Duke Charles, 1st rate.
 Au-Vin, vinous, too ripe.
 Bartlett, 1st rate, prolific, bears early.
 Beurré Beaulieu, 2nd, vinous.
 B. Beaumont, 3d.
 B. Bosc, 1st, fair, large, handsome.
 B. Cadette, good 2nd.
 B. d'Arenburg, 1st, one of the best, vinous, juicy.
 B. Gris d'Hiver Nouveau, a good winter pear.
 B. Koenig, 2nd, but too ripe.
 B. Ranz, good 2nd, weak grower, best on pear.
 B. Rhin, 2nd, delicious, fine texture.
 B. Van Marum, 3d.
 Bezi de Montigny, 2d, rich, sweet, tender.
 Bleeker's Meadow, 1st, high-flavored, small.
 Belle Lucrative, 1st, very good.
 Belle de Flanders, nearly 1st, large, handsome, prolific.
 Bishop's Thumb, 2d to 1st, flat.
 Capiaumont, very good 2d, good grower and bearer.
 Columbia, 3d, but too ripe.
 Colmar Musqué, 1st, high flavored, fine texture.
 Davi, 2d, peculiar flavor, vinous, juicy.
 Doyenné Boussock, good 2nd, large, fair, juicy.
 D. Blanc, 1st in every respect.
 D. Scieulle, good 3d, large.
 D. Gris, good 2d, vinous.
 Dearborn's Seedling, 1st.
 Dix, 1st, large, thrifty.
 Duchesse d'Angoulême, 1st, large.
 Easter Beurré, 1st, large, very good winter.
- Echasserie, 1st, juicy, vinous, thick skin.
 Figue, (not well ripened) 2d, rough, astringent, juicy.
 Fulton, 1st, very pleasant, juicy.
 Gansell's Bergamotte, good 2d, large.
 Gros Rateau, 3d, stringy, coarse.
 Grand Soleil, 1st, juicy, fine.
 Glout Morceau, good 2d, large and fair.
 Heathcote, good 2d, thrifty.
 Henry IV, almost 1st, juicy, breaking, sweet, beautiful.
 Jalousie, poor 2d, rotten at core.
 Le Cure, 2d, prolific, early bearer, large.
 Louise Bonne de Jersey, almost 1st, good grower and prolific, handsome.
 Marie Louise, very good 2d, prolific.
 Napoleon, very good 2d, prolific, hardy.
 Oliver's Russet, good 2nd, not juicy.
 Oswego, good 2d, thin vinous juice.
 Paquency, 2d, good flavor.
 Paradise d'Automne, 1st, much admired.
 Rappelje's, almost 1st, like B. Bosc, smaller.
 Rousselet d'Hiver, promises well.
 Seckel, preferable to all others in flavor.
 Soldat Labourer, 3d, sweet, flat.
 St. André, very good 2d, astringent.
 St. Ghislain, 1st, very fine and spicy.
 Stevens' Genessee, 1st, very handsome.
 Summer Bon Chrétien, good 2d.
 Triomphe de Louvain, very good 2d.
 Urbaniste, almost 2d.
 Van Mons Leon le Clerc, 1st, large, fair, sprightly, vinous.
 Washington, 1st, a very great favorite.
 Westcott, 1st.
 Winter Nelis, 1st, very vinous, juicy, slightly astringent.

STRAWBERRIES—IMPREGNATION.

DR. WARDER: Courtesy is a fine thing in a family, and especially in the family of Editors in their treatment of each other, as it is a rare occurrence. Belonging to the Quaker family, I grant that great courtesy is natural to you, yet I must condemn even so rare a virtue in a Horticultural Editor, where any doctrine is advanced calculated to mislead in places where the true character of the strawberry plant is not understood. Your correspondent, in a recent number, closes by saying, "If you protect the blossom from jack frost, and attend to the above directions, the sexual character need not be studied." The writer here shows a want of knowledge of the sexual character of the plant, known to observing gardeners in his own country.

Till last year, I was not fully convinced that hermaphrodite plants required impreg-

nation. In my forcing department, last season, when in blossom, no insects were admitted, and not one hermaphrodite blossom in thirty bore a perfect fruit, and pistillates adjoining, not one to fifty. Even in the open ground, except on the south border of a high wall, there was the same result, from cold weather, and no insects flying during the blooming season. My present gardener, Mr. Hazel, who is recently from England, informs me, that they have ascertained the same fact, and in early forcing impregnate, by conveying the farina to the female organs by a small brush. They cultivate hermaphrodites only, and never have a full crop of perfect fruit.

I will give your correspondent a premium of \$500, when he shall satisfy you of the truth of his assertion, that from the kinds of hermaphrodites he names, he "*will produce larger, better flavored fruit, and more prolific than any of the cracked prized varieties he has seen in America.*" If \$500 is not sufficient to induce him to prove his assertions, I trust your *courtesy* will lead you to give a like sum. What say you? For one per cent. I would insure you against loss. But I am certain your *judgment* would in this case be greater than your *courtesy*, and lead you to refuse the insurance. [Thank you for the *courtesy*: it is a safe offer.]

In this age of miracles, it may be possible to raise a seedling perfect in both organs, and bearing a full crop of large, perfect fruit. Schneike's Cincinnati Garden of Eden Seedling may continue to sustain this character. But certain it is, no English hermaphrodite has done it. The method of culture recommended by your correspondent is correct in all respects, and should be followed where this fruit is raised for family use only. Our market gardeners, who bring in one hundred and more bushels of a day, would find it too expensive.

In such an age, it is not deemed safe to rely in all cases on the old rule of reason and common sense. But as long as I rely on these, I must believe that Mr. Pardee will soon abandon his belief that "strawberry vines crowded together, will produce full crops of perfect fruit." With me they have never averaged one-third of a crop of perfect berries. A crowded bed of pistillates, with staminate or hermaphrodites near them, may produce a better crop than Keen's famous seedling, and others of that class, so much lauded in England, even when planted in separate hills. For all these celebrated English varieties are of hermaphrodite character, and though perfect in the male, are more or less imperfect in the female organs.

Both pistillate and hermaphrodite blossoms require impregnation through the agency of bees and other insects, that fly from flower to flower and carry farina on their feet and wings. I was not till last season aware that this impregnation is necessary even in blossoms perfect in both organs. Where plants are crowded together, insects can not get to a large portion of the blossoms, and they must prove barren. In a cold spring, when insects are scarce, the impregnation will be less perfectly effected. In our city and vicinity, we have but few bee houses. In the vicinity of the residence of Mr. Pardee, I presume they are numerous. If so, necessity will compel the bees to be more expert than they are with us, in finding food by seeking out the blossoms, that are covered with leaves. The wind does not appear to carry the farina.

It is thirty-five years since I began raising cucumbers and melons in hot beds; I had an old gardener, and to my surprise, I found all the first fruit turned yellow and dropped from the stems. My gardener could not give me the reason, but said that such

had always been the result in Germany. I soon discovered the cause. There were no insects to carry the farina from the male to the female blossoms. I directed it to be done by hand, and not a fruit was lost. As soon as insects appeared, it was no longer necessary.

Yours, truly,

N. LONGWORTH.

REMARKS.—I must congratulate my correspondent "Duster," whose communication in the June number of last year appears to have been based upon true principles, that the world is likely to profit by his suggestions. For a philosopher to indicate the facts bearing upon a point of natural history, is one thing—a much greater, and more practically valuable result for the community, however, is the persevering re-iteration of these observations, and the application of a practice based upon the facts indicated.

Our entomologists discover that each kind

of insect has its favorite resort, upon some peculiar plant, and new species, introduced from abroad, sometimes fail to set fruit, because the especial insect whose function it is to *dust* the stigmas with the pollen, has not also been introduced, nor has any analogous insect supplied its place just at the right season. In the greenhouse, every gardener is familiar with the fact, that many plants fail to set fruit, and artificial impregnation is constantly pursued. Even in this very matter of the strawberry, I find that an English gardener* of no mean pretensions, in a recent communication to the *Horticulturist*, after asserting that the pistillate strawberry is peculiar to this country, and quoting Mr. Knight's theory *against* himself, admits, that with their perfect-flowered varieties, it was necessary to adopt artificial means to effect a distribution of the pollen, he says he found it necessary "to pass the hand gently over the trusses of the bloom, to assist the diffusion of the pollen."

* J. SAUL, Washington, D. C., in *Horticulturist*, Vol. VI, page 557.

FRUIT CULTURE.—FUNGI.

THE following observations, based on many years' experience and observation, are very acceptable, from one of the pioneers of Pomology in western New York, they are condensed from his essay in the *New York Farmer*.—ED.

In the first place, it is presumed that the object, with most farmers is to realize the greatest net profits from their investments in agricultural pursuits. For this purpose the appropriation of lands to the raising of certain kinds of fruits, adapted to the locality, offers great inducements.

To render such outlays most profitable, persons making them should decide upon the place of their permanent residence, as years must elapse before the profits can be realized. They should also study the different fruits which may be most profitably cultivated in their locality, taking into consideration the nature of the soil, the temperature,

and the diseases to which the fruits are liable.

We will suppose that for the northern part of the State New York, the Apple and Pear offer the greatest inducements for cultivation. It is known that these fruits are subject to various injuries from different causes which lessen the profits of cultivation, and that different varieties possess different qualities for resisting those injuries in different degrees, all of which should be consulted by the cultivator. Some varieties are better calculated for our present market than others, and this does not always depend upon the superior, flavor of the fruit, but much upon the time of ripening, and their capability of being transported without damage.

One of the greatest injuries to the Apple and Pear at this time, and most to be dreaded in future, is the increase of that family of parasitic plants commonly denominated *fun-*

gi which spread themselves upon the surface of the fruits in black spots, while the roots penetrate the skin, thereby interrupting the circulation, and preventing the development and perfection of the fruit.

The increase of this family of plants within the last twenty-five years has occasioned much speculation as to the probable cause. Some attribute it to the continued use of fermented manures, and this appears to me the most plausible theory. From whatever cause they originate, one thing is certain, that there is scarcely a plant or fruit now cultivated in this State, which is not more or less injured by *fungi*.

In speaking of Cryptogamous plants, under the general term of *fungi*, I refer to many of those embraced under the general appellation of "*blight*" or "*mildew*," which are not commonly considered botanical specimens; hence the expression of the poet, "He calls for famine, and the meager fiend blows mildew from between his shrivelled lips, and taints the golden ear." Such ideas are now yielding before botanical investigations, and this class is divided into different families and so arranged that their rela-

tions are as easily ascertained as those of the more perfect plants. We do not pretend that the plant termed *rust* upon wheat is the same as the black spot upon the surface of Apples or Pears, or the *rust* or disease upon Potatos, yet in speaking of them instead of their strict botanical names, we prefer using the more common term *fungi*.

Our object in calling the attention of your readers to this subject is, that some varieties of Apples and Pears withstand the injuries of the *fungi* better than others, and it will be of the utmost importance to those planting out or cultivating orchards, to make themselves acquainted with the capabilities of the different kinds of fruits to resist injury from *fungi*, a frequent cause of failure.

I have examined orchards the past season in the Eastern States, where there was sufficient fruit set upon trees for a good crop, but it was mostly rendered unfit for use by parasitic plants upon the surface.

Hereafter I may name some of the most valuable varieties of Apples and Pears, which are least liable to injury from the above cause. The Virgalieu pear has suffered very much.

N. GOODSSELL.

PRESERVING YOUNG APPLE TREES FROM MICE.

FROM some cause or other the field mice have become uncommonly plenty in our vicinity, and during the two past winters have done much mischief in gnawing the bark from young apple trees. It is an object of much consequence to learn some method of preventing their ravages. The mode recommended by Mr. Parlin, some time ago, in the Farmer is a very effectual one, namely—take the splittings or shavings of leather from a tannery, and tie around their stems. But these are not to be obtained every where. Probably cloth put around and tarred would be effectual. Arsenic put into meal and laid at the foot of the tree, might kill some of them, provided they should eat it—but in our section, where we have deep snows, they do not always begin to gnaw at the foot of the tree, but oftentimes burrowing along under the snow, if it be very deep, begin a foot or two above the roots, and gnaw upwards. The following method might be of some service. It is recommended by a wri-

ter in a French Journal and quoted by Hovey in his Magazine of Horticulture, for preserving young fruit trees from the attacks of rabbits and hares. People in this country know that these animals, when they are plenty, will do great mischief among young trees.

Mix four and one-half pounds of quicklime in lumps, with two and one-half gallons of water, and add a few handfuls of salt, stirring the liquid until the two substances are intimately incorporated. Then take a handful of rye straw and bind it on a stick to form a brush, (a small white-wash brush would be better.—Ed.) and gray-wash the trunk and branches of the trees from the ground upwards. The wash applied warm has also the advantage of preserving the bark clean and in a state of perfect health, by preventing the increase of moss, which is often pernicious in its effects, and always disagreeable to the eye.

Whether the above wash would adhere

in this part of the country, during the snows and rains of our winters remains to be seen.

How would a wash of the arsenical soap, which is used for preserving the skins of animals and birds, answer to put upon the trees? If the arsenic would not injure the tree in any way, it would be effectual, for if the mice ate it, death to them would be the result.

The following is the recipe for making it:

Camphor,	5 ounces.
Arsenic, in powder,	2 pounds.
Castile, or hard soap,	2 pounds.
Pearlash, or carbonate of soda,	12 ounces.
Lime, in powder,	4 ounces.

Cut the soap into small slices, as thin as possible. Put them into a pot over a gentle fire, with a very little water, taking care to stir it often with a wooden spatula. When it is well melted, put in the pearlash and

powdered lime. Take it off the fire, add the arsenic, and triturate the whole gently. Lastly put in the camphor, which must be first reduced to powder in a mortar by the help of a few drops of spirits. Mix the whole well together. It should then be put into some vessel where it can be kept carefully and safely, as it is a virulent poison.

This we know to be an excellent preservative of skins of birds and animals designed for a cabinet. For such purposes the camphor is an excellent ingredient to keep off insects, but for a wash of trees it might be omitted.

It makes a lather with water, and is easily applied with a brush.

We do not recommend this wash with any knowledge of its efficiency for this purpose, but merely as an experiment which we hope may succeed.—*Maine Farmer*.

HORTICULTURAL NOTES FROM BUFFALO.

DR. WARDER: As you have expressed a desire to hear something of the Horticulture of Buffalo and its vicinity, I will endeavor to comply with your request, in a small way, by giving you a few notes of my experience with regard to some of our common enemies, and as such are sometimes of little value without a knowledge of soil and locality, I shall in the outset give you an idea of them.

My father's place, whence I write, lies about a mile and a half north east of Lake Erie, pretty well elevated above it. The soil is varied. Immediately around the house and fruit garden, it is a deep, sandy loam, fine for gardening purposes, and also for the operations of insects in general, and the Curculio in particular. A part of the orchard consists of an elevation, with a nearly east and west aspect, and a warm, gravelly soil, and the remainder lying on the eastern slope, is again a sandy loam, changing to a black mold on a clay subsoil, on the flats below.

Our climate is quite variable. The sum-

mers are not usually very warm, and altho' at times the heat is very powerful, the nights are almost invariably cool. The winters have generally been mild of late, with little snow, and a long, cold spring; to make amends for which, however, the autumns are delightful. Wind we have at times, "in great perfection," usually from the southwest. This is so generally the case that in some of the older orchards in the vicinity, which were not properly cared for and staked when young, the trees all incline at an acute angle in the opposite direction. A late frost, which is of almost an annual occurrence, sometimes does great injury to the fruit crop, as also to early vegetables.

Under these circumstances our trees have all grown luxuriantly, and have generally borne early and well, but an exception must be made in the case of plums, attributable to the Curculio, which has annoyed us prodigiously. All other insects are of little injury in comparison, and can be fought with good hopes of success, but this miserable little rascal has had it all his own

way, so far, in spite of all the various methods practiced to destroy it. A few old trees of the common blue plum, generally continue to bear a respectable crop, whether from the inability of the insects to puncture all of the immense quantity of fruit which annually sets, or from a distaste to the thick skin and acid flesh, (for which I would not blame them,) I know not, but the younger trees and fine varieties drop their fruit as a matter of course. I have tried bagging the limbs in a netting of muslin, etc., hoping by this means to exclude them, but they invariably found an aperture to enter at, and destroy the crop. One apricot tree of moderate size, I covered entirely, giving it the appearance of a balloon, but to no purpose, for I picked up and counted *five hundred* fruits from the ground beneath.

Lime would not "stay put," but on one espalier apricot, on the north side of the house, one fruit which I *plastered* with a thick coat, ripened nearly a week in advance of its fellows, either from the fact of its being near a much frequented path, or from the fancy of the insect, for there is something a little singular in the way some trees escape at times; for instance, a green gage of good size, which has never before borne a dozen fruit at once, was the past season literally loaded with that finest of plums, of large size and delicious flavor. In that orchard, only three or four other trees bore, and they had from one to a half dozen each; all had bloomed finely and set large crops. Those next to it, in the next row, and by the side of the same path, did not escape. Was this instinct?

I have lost faith in everything but shaking and killing, which I have reason to think will succeed if *well* done, but no half way practice will avail.

A fact which is new to us here came to light the past season. One of our neighbors

in "exploring" some affected fruit on a prune tree, found to his astonishment, not a worm, but a nearly full grown Curculio, and this not in a solitary instance, but in several specimens on the same tree. There is *no mistake* about this, and if the insect is to increase in this way, some *new* remedies must be invented to meet the emergency. [Can it be so?]

Our cherry trees on the gravelly elevation before described, have been terribly disfigured by gum, and a few killed outright; the past season, the ground has been covered by a heavy growth of clover, which we think has acted beneficially, by preventing the direct action of the sun on the roots. Some trees which were only slightly affected, have healed after cutting out the diseased parts, and on a few I have tried Professor Turner's plan of disbarking; one died, but sufficient time has not elapsed to judge of the effect on the others.

Pear tree blight has been our worst enemy. During the season of 1850, about forty trees were more or less affected, of which about twenty died at the time, and several since. I cut with an unsparing hand, and occasionally succeeded in saving a tree nearly entire. Others *would* die in spite of me, as fast as I cut, until within a few inches of the ground or *below* it. This season the disease has been less virulent, which I attribute to the fact that nearly all the pear trees have been sheathed with straw. Some trees which died down to the straw, pushed out shoots through it, and bid fair to make new heads, whether to be again blighted remains to be seen.

The pears are scattered over the whole place, but are mostly on the eastern slope, and on the flat at its base; and I trace no difference in the virulence of the disease, to the soil or situation.

Apples and Quinces have been somewhat

similarly affected, but in their case, only the extremities of the limbs were diseased, extending down one, or at most two seasons' growth, and running over the entire surface of the top, giving it the appearance of having been scorched.

Peaches have been a complete failure with us so far; about forty trees were planted on the gravelly knoll, and but one now remains; the others having either died or been dug out. We are trying a few in a very sheltered situation near the house, which may, perhaps, do better; but in the open orchard, all, except a few of the com-

mon frost peach—which accidentally got in among the rest, and grew finely—appeared to be injured by the cold, in winter and spring; and when about to make a start, the curl of the leaf would attack them, and completely stop the growth for the season. Fruit we have none, but we shall not give it up until some experiments which I am now making with Espaliers, shall have been pursued; when, if it can *not* be raised, we must depend on the East and West for our supply of this delicious fruit.

JNO. B. EATON.

Buffalo, January 18, 1852.

FRUIT TREES IN THE SOUTH.

THE following suggestions are taken from the Southern Rural Almanac, edited by T. Affleck, Washington, Miss. They are commended to the attention of Southern cultivators, for though I do not and can not agree with Mr. Affleck in all his notions about *acclimation*, as has already been set forth in previous numbers, still, his extensive experience and observations of soils, training and the cultivation of fruits, must prove valuable to those wishing to grow these delicious luxuries in southern latitudes—and are, therefore, here repeated, for their benefit.

SOILS.—The *Fig* thrives well in any good garden soil; bearing most abundantly, and they are least likely to be injured by frost, or by continued hot weather, if the land be high and not too rich. The *Orange* requires a good, mellow garden soil, not wet. The *Grape-vine* must have a rich, deep, mellow soil, inclined to sandy, and with a good proportion of leaf mold and strong manure—slaughter house offal, partially decayed broken bones, oyster shells, etc., are good; this applies more particularly to the European varieties. The native American Grapes, as the Catawba, Isabella, Cape, Madeira, etc.,

should have a similar soil, though not necessarily so rich. The improved Scuppernongs thrive well in any moderately good, dry soil; if very rich, the growth becomes too great, and the productiveness is lessened. For the *Raspberry* provide a deep, rich, cool and stiffish soil; for the *Strawberry* a similar soil, but inclined to sandy.

All fruit trees must be *trained low*, in this climate. The protection of the stem and main branches, and the shading of the soils in which the roots find their support, from the powerful rays of the sun, are absolutely necessary to the production of fruit. This is to be effected only by training the trees with a low head, and encouraging a thrifty growth. We have this well exemplified in the native forest trees. When forest-grown, their united heads afford an ample shade. But if standing alone, every tree protects its own stem and roots, throwing out low and wide-spreading branches for the purpose.—And this is especially the case in the Magnolia, Beech, etc., which, in their smooth and glossy bark, resemble the fruit trees.

An orchard of choice apples would prove a pleasant and a profitable appendage to every plantation in the country. Land is cheap enough with us, and trees can now be had at rates sufficiently low. It seems as-

tonishing that so few provide the means of supplying to their families so cheap and wholesome a luxury. No expenditure of money and labor will yield a reward so bountiful as that bestowed upon such an orchard. Even for stock, the apple is found more profitable than grain, acre for acre.

We have heard one neighbor remark, this season, that from a few young trees of what he supposed to be the Red Astrachan, he had sold on the levee in New Orleans, a quantity at \$9 per barrel. Another said he sold \$60 worth of the same apple from (we think) five trees. And these results are common every year, from trees of summer and early fall apples. The late fall and winter sorts require cool fruit-rooms to keep them in.—Otherwise the high temperature causes them to decay too soon to be of very great value.

The *Peach* and the *Nectarine* are emphatically Southern fruits. Yet the great attention and care bestowed upon their cultivation in some of the Northern States—New Jersey, for instance, have produced crops there when our neglected trees have failed. The richest and most luscious, juicy peaches and nectarines we have ever seen, were grown in this part of Mississippi. The belief that it is necessary to rely solely upon seedlings grown on the spot where they are to bear, and not upon worked trees, is an erroneous one—the finest and most productive trees we know of, are of well-known American and European sorts, worked upon Southern grown seedlings in the nursery row, and afterwards transplanted. In old times, peaches were extremely abundant here. The remains of old orchards, in which the trees have evidently grown to a vast size, are by no means uncommon. The soil was new and rich; there were none but acclimated trees to be had, as all grew their own trees from seed; much of the fruit being, therefore, very inferior. Finer varieties were now sent to the South from Northern nurseries, often badly lifted and packed, and exposed to all the risks and injuries of a long voyage; and being entirely unacclimated, were unfit for fruit bearing in these latitudes. The constant failures which followed produced disappointment and discouragement, and an almost entire abandonment of peach-growing.

The peach and nectarine bear their fruit upon the young wood of the previous year's

growth; the pear and apple upon their fruit-spurs. Hence a good growth of thrifty young wood, each year, is indispensable to the former. They require a free, rich soil, or abundant and frequent manuring; an annual pruning calculated to produce a good supply of young wood equally distributed over the tree; protection from the *ageria*, the parent of the worm which injures the roots and stems under ground, causing an oozing of gum most destructive to the tree, and the removal of these worms with the point of a knife, so soon as discovered.

Orchards of these fruits should be formed of thrifty, compact, well-rooted young trees, worked close to the ground, and with a stem of only some two or three feet. Such plants will not only make infinitely finer and larger trees, but will bear fruit years before the large bean-pole apologies for trees not unfrequently offered for sale. Thrifty trees of moderate size being procured, and not more than two years old from the bud, plant as soon as possible after the falling of the leaf. If in bottom land, drain as thoroughly as circumstances will permit, plow into ridges twenty-five feet wide, and plant on the crown of the ridge, at a similar distance. If the soil be stiff, a large wheelbarrow-full of sharp sand to each tree, dug lightly in around, will be found very beneficial. Lime rubbish, marl, and leached ashes, may also be applied. A peck of broken bones in each hole, or of charcoal, broken into about inch pieces, with a wheelbarrow-full of good sandy compost to each tree, will give them a good start in almost any portion of our thin hill lands. But such lands should have an annual top-dressing to insure good crops. When planting, open a large hole, not too deep, and plant the tree no deeper than it stood before, spreading out the roots evenly and carefully with the hand. Do not be afraid to cut the young wood well back. The orchard should have the plow, hoe and cultivator through it sufficiently often to keep the young trees growing vigorously, whether or no the intermediate space is otherwise occupied. The only crops admissible in an orchard, are such as require tillage, and are manured when planted, as Irish or sweet potatoes, turnips, beets, etc. A crop of clover, sown in October, plowed in about the middle of May, followed by sweet potatoes, etc., would be found improving.

The Garden.

A FEW WORDS ON THE PLEASURES OF GARDENING.

GARDENING is one of the few, or perhaps the only occupation in which the poor can indulge with the same enjoyment as the rich. There are few if any other pursuits to which there is not a limit drawn by man's circumstances. But the pleasures of the garden are equally apportioned to the peasant and the prince. 'Tis there we find an infinite variety of objects for the mind to dwell upon, engaging its attention with pleasures as rational as they are innocent, as pure as they are intellectual—not only is our fancy warmed and our faculties improved by studying those beautiful objects around us, but the very contemplation of them refines our taste, stills the agitated feelings, and impresses upon our hearts peace and good will towards man—praise and gratitude towards God. One moment's reflection upon the vegetable kingdom will impress upon our minds the value of this beautiful department of nature. Where do we obtain our food, fuel, clothing, and habitations but from the vegetable kingdom? Ask the merchant for his ships, the miner for his coals, the weaver for his cotton, hemp, and flax, the bee for its honey, or the worm for its silk? All are chiefly if not entirely of vegetable origin.

In order to enhance our ideas of the beauty and usefulness of vegetables, we have only to picture to ourselves what would be the appearance of the face of nature without them. It is true we might have the surface of the earth portioned out into hill and dale, and intersected at various distances by streams and rivers—but every thing would be bare, rugged, and unseemly, and nothing but a picture of desolate barrenness would appear.

But instead of this barrenness the beneficent God of nature has clothed the earth with every variety of vegetable form.—Every region of the globe swarms with multitudes of different kinds, beyond the power of the Botanist to enumerate, the contemplation of which affords an ever varying delight to the senses, while the investigation of their habits and structures no less agreeably exercise the judgment.

While we however thus study nature, we should remember that we should do so not merely for the gratifying of our own curiosity, but for the nobler purpose of acquiring and diffusing instruction to others, for it has been justly remarked that not he alone is to be esteemed a benefactor to mankind who makes a useful discovery, but he also who can point out and recommend an innocent and useful pleasure—and I must here mention a few of the many advantages to be derived from gardening, first it is certain to attach a man to his home, this alone is enough to encourage us to try to increase a taste for it—secondly, as a recreation it conduces to health—thirdly, it promotes civilization and softens down the temper and manners in common life—fourthly, it leads to a study of nature, which naturally tends from a contemplation of the wonders of the vegetable kingdom to direct our minds to contemplate the Divinity and admire his Provide the beauty, contrivance, and design, conspicuous in all his works, goodness and power united meet us at every step—the intellectual eye is feasted and a delight is produced which, unlike every other species of excitement, leaves no sting behind.

* * * *

SELECTION OF FLOWERS.

To select the most desirable plants, and to arrange them in good taste, requires an extensive knowledge of the floral kingdom. The time of flowering must be known, the height, hardiness, habits, etc.: also the effect of combination of different colors, so that the plants may be arranged in such a manner as to produce the happiest effect. I shall place before my readers an extensive collection of the most desirable plants, embracing hardy Annuals, Biennials, Perennials, and Shrub-beries, pointing out their various habits, qualities, beauties or defects, and modes of cultivation describing them as simply as possible, without using any more technical language than is necessary for the purpose. The circumstances of different individuals vary so much, as well as their taste and fancy, that having given these particulars, it must be left for each one to choose for himself such plants as are adapted to his circumstances, the extent of ground, soil, etc.

Some persons, anxious for a great variety, crowd too many plants in a small space; consequently have nothing in perfection. This is too often the case with young beginners, and it is not uncommon to see the small patch devoted to flowers as unsightly as if it were filled with weeds. It is much better to have a few varieties, and cultivate them well, than to pursue the careless style which is very frequently seen in our flower gardens.

Tenants who occupy their places for an uncertain length of time, are not generally disposed to make many improvements by the addition of plants. Those who may be thus situated and have a desire for a flower garden can without much outlay have a succession of flowers through the season. The following annuals may be obtained for one dollar:—Double Rocket Larkspur, Phlox Drummondii, Mignonette, German Asters, Coreopsis Drummondii, Pansies, Sweet Peas, Poppies, Gillyflowers, Chryseis, Purple and White Candytuft, Nemophila, Petunia, Lavatera, Convolvulus, Globe Amaranths, Immortal Flower, Mourning Bride, and Sweet Sultans. For one dollar a dozen, Verbenas, of different colors, may be obtained that will keep up a lively bloom from June to November. A dozen fine Dahlias and a few Gladioli will cost three or four dollars, which, with a

few monthly roses to be turned into the garden, and to be re-potted in autumn, and a few choice perennials, grown in deep pots and plunged in the ground, will not altogether exceed the sum of ten dollars. These plants, well grown, will make a fine display, and quite a respectable flower garden.

Breck.

COLOR OF FLOWERS.

Those who have paid little attention to the matter are often surprised at the variation in the color of their roses. The full rich crimson of a good rose season often proves a pale blush when the drought and an unseasonable temperature occur. So the monthly bloomer will often give full and perfect specimens in the early seasons, or perhaps after the cool weather of autumn, while during the heat of July and August its blossoms will be reduced one-half or three-fourths in size, and so changed in color that nobody could guess what they are.

Of course the purchaser of a celebrated variety of the rose will be vastly disappointed when his expectations are thus set at defiance and he may be inclined to cast the blame on the vender as if he had been guilty of deceit. Every experienced student of botany however, knows that this sporting of colors is not confined to the rose nor to the garden; and that color is not a sure guide in deciding upon the species of a large proportion of wild flowers. The fact is that whole families of them change for a variety of causes, such as soil, climate, temperature, heat, cold or drought.

Few of our garden flowers are so variable as the rose or so easily jostled out of its characteristic garb and manner by circumstances. To produce it in true character requires a concurrence of many conditions. It must have a soil of good strength, well drained, and not too much heat or drought. The rose loves a cool moist season, such as that of 1851 here, when it shone out in all beauty and perfection; it will not bear to be overgrown with weeds or other plants, and it should be carefully nurtured during the season, if it is to bloom the following spring. It will pay back in the ratio of what it gets. If carelessly treated all the summer and fall it will not be generous of its blossoms in the spring.—*Prairie Farmer.*

CLEANLINESS.

CLEANLINESS, says some old writer, is the charm of animated beings; but we suspect that plants were not included in the maxim. People, indeed, seem to have no notion that because they must clean their own skin, if they would preserve their good looks, therefore they must cleanse the skin of the creatures that surround them. It must be confessed, indeed, that cleanliness would seem, from the practice of many persons, to be the peculiar attribute of man. The state of their cows, and their pigs, and their oxen, plainly enough declares a conviction, that dirt is the heritage of all living things, man excepted. To introduce the sponge and the curry-comb into the pig-stye and cow-shed, is a degree of rural dandyism, of which they think no rational being would be guilty.—How much stronger, then, must be the belief, that to plants, the peculiar children of the soil, dirt must be natural, if not necessary.

And yet we find, in the condition of the plants in some good gardens, a degree of neatness observable, which our forefathers with many of their descendants, thought to be wholly uncalled for. But we fear that, even here, it is not uncommonly supposed that the chief ground for keeping the plants clean is, that their colors are brighter, and that they harmonize better with the wood-work and floors, in which neatness is recognized by common consent. It may be, too, that, in greenhouses, the fair hands that gather flowers are not to be soiled with impunity, because of a gardener's neglect.

If these reasons were the only ones for keeping plants scrupulously clean, they would be weighty enough to demand attention; but they are among the weakest. It is notorious to those who understand the nature of vegetable life, that a freedom from impurities upon the skin is of even greater vital im-

portance to a plant than to a man. It is nearly ten years since we showed, in these columns, that the main reason why green leaves and gay flowers are banished from the squares and balconies of London, is the filthy atmosphere that is incessantly defiling them; and we then asserted, what few believed to be true, if as much washing were bestowed in London upon a pet plant, as upon a lap-dog, the one would remain in as good condition as the other. The reasons are obvious. Plants breathe by their leaves; and if their surface is choked by dirt, of whatever kind, their breathing is impaired or prevented.—Plants perspire by their leaves—and dirt prevents their perspiration. Plants feed by their leaves—and dirt prevents their feeding. So that breathing, perspiration, and food, are fatally interrupted by the accumulation of foreign matters upon leaves. Let any one, after reading this, cast an eye upon the state of plants in sitting-rooms, or ill-kept greenhouses; let them draw a white handkerchief over the surface of such plants, or a piece of smooth white leather, if they desire to know how far they are from being as clean as their nature requires.

There is so little novelty in all this, although but seldom thought of, that we should scarcely have introduced the subject, if it were not for some new and curious experiments, just published by M. Garreau. This experimentalist has, for some time, devoted himself to inquiring into the functions of the skin of plants, and his observations entirely confirm all that has been stated upon the subject by others. Among other things, he found that soap and water had great merit; plants well washed acquiring a power of absorption much beyond what they possessed in their unwashed condition. Thus the rate of absorption in the Tangiers *Ferula* was as

4 to 0, after ablution; and in the Yellow Gentian, as 30 to 20. In like manner, the petals of the Pœony took up five and six times as much after as before being cleansed; and the leaves of the Lilac, Lily of the Valley, and Clematis, when washed, took up about twice as much as before.

It is not a little curious, however, that soap and water had a far greater cleaning effect than mere water; thus a Fig-leaf, which had been lathered, absorbed ninety parts, while after a mere water bath it took up only half the quantity; and a bramble, which soap and water provided with one hundred and thirty parts of water absorbed,

could only consume ten parts when cleaned with water alone. Can there be a more conclusive argument in favor of the repeal of the soap duty? We respectfully submit this to the consideration of the Chancellor of the Exchequer.

On a future occasion, we shall lay before our readers, in a more formal manner, the results to which Mr. Garreau's experiments have led him. In the mean while, enough has been said to show that a dirty gardener is necessarily a bad one, as well as a particularly disagreeable person.

DR. LINDLEY.

Gardeners' Chronicle.

RAISING VEGETABLES.

THE ladies, I believe, look over this department of your paper with much interest, especially if they belong to families engaged in agricultural pursuits; and more especially if they are personally and experimentally interested in horticultural economy, they read these columns with a hope to be instructed, or at least interested in the communications that make their weekly appearance here.

I have somewhere, I think, met with a definition of civilization, that it consisted in "the art of dressing vegetables for food." Without entering into the merits of this definition, I would suggest its amendment by inserting before the word dressing, of raising and, so as to read "of raising and dressing vegetables for food." It is of primary importance to know how to raise vegetables. The ladies say, "Gentlemen we will fry your fish brown, catch them and bring them to the kitchen." Good ladies, all I want to impress upon you in regard to raising vegetables is that you should know how it ought to be done; that is, the time when, the place where, and the manner how.

Now is the time to begin your operations for the next season. Provide seeds and plants in abundance of all kinds you desire to raise. Nature is bountiful in her supply. Imitate her example. Only let me observe in this connection, that when your young plants have fairly started, thin them out rigorously.

Next select your ground; and outside of your garden, the field intended for corn or potatoes is generally the most suitable. It should be fallowed; and if it is now in sod the sooner it is turned around with the plow the better the sod will rot this season, and the ground be in fine state next spring. Now determine which direction your rows shall run, they should all run parallel, at the distance of four to six feet from each other. On the highest ground at the head of the rows a spot should be selected for a manure heap. The luscious watermelon and nutmeg; the tomato and vegetable egg; the squash and the pumpkin; the cucumber and the French pickle; the salsafy and beet; the Lima bean and marrowfat, the sugar-corn and dozens of other delightful vegetables for dinnerpot or dessert, can be produced on any farm if you have enough of the substances above named. It is the wool from which you spin your yarn; the flour to bake your cakes; your meat as well as bread; the substance to produce the sugar, acids, coloring, etc., etc., of the vegetables you design to raise. You must provide abundance of it.

Now then, ladies, you have the seeds, the ground, and the place for the manure-heap selected and marked. Tell your good man that there you want a compost heap made of stable-manure, sand, and woods' ground, (by the last article I mean the decomposed

leaves and other vegetable matter to be found in thick, damp forests.) This manure-heap to be made "right away." When a shower of rain stops the plow, or other out door work, mention the compost. If the boys go to mill, or to the village store, let them take the cart and shovels and bring materials for the compost; and commencing 'right away,' you can have a supply of good material on the ground this fall, ready for next spring's use. Hog manure and hen manure is the best, but that of horses or horned cattle must do if you have no other. First haul and spread a load of "wood's ground," next a load of stable-dung evenly over that, then a load of sand,

river or road sand, over both, and so on until your heap is completed. An occasional sprinkle of salt, plaster and ashes would be a valuable addition. The heap should be made basin-shaped on the top so as to retain the rainwater and melted snow. You need not fear drawing too large a heap together; what is left can be used to advantage anywhere. It is good for the corn field, or if you choose the flower garden.

My manner of preparing the ground planting the seeds and farming, I will leave until near the time for their use, when I will send you a brief statement of them.

Dollar Newspaper.

HEAT.

THE following article on heat, is from G. W. Johnson, and contains much that is useful to be understood:—

HEAT is the prime agent employed by the Almighty Creator to call vegetable life into existence, to develop vegetable form, to effect all vegetable changes, and to ripen all vegetable produce. All these effects are performed most efficiently, in the case of every plant, at some different temperature or degree of heat; and he who ascertains most correctly those heats, has taken a gigantic step towards excellence as a gardener. An uncongenial heat is as pernicious to vegetables as to animals. Every plant has a particular temperature without which its functions cease; but the majority of them luxuriate most in a climate of which the extreme temperatures do not much exceed 32° and 90°. No seed will vegetate—no sap will circulate—at a temperature at or below the freezing point of water. No cultivation will render plants, natives of the torrid zone, capable of bearing the rigors of our winters, although their offspring, raised from seed, may be rendered more hardy than their parents.[?] Others are capable of resisting the greatest known cold to which they can be exposed; yet all have degrees of temperature most congenial to them and if subjected to greater cold, are less or more injured proportionately to the intensity of that reduction. If the reduction of temperature be but slightly below what is congenial, it only causes the

growth of the plant to diminish and its color to become more pale; this effect being now produced by the plant's torpidity, or want of excitement to perform the requisite elaboration of the sap, as it is by over-excitement when made to vegetate in a temperature which is too elevated.

If blossoms are produced at all they are unfertile, and the entire aspect of the plant betrays that its secretions are not healthy, and its functions are deadened. Mr Knight says, "that melon and cucumber plants, if grown in a temperature too low, produce an excess of female blossoms; but if the temperature be too high, blossoms of the opposite sex are by far too profuse." The dryer the air the greater is the amount of moisture transpired; and this becomes so excessive if it be also promoted by a high temperature, that plants in hot-houses, where it has occurred often dry up as if burned. The justly lamented Mr. Daniell has well illustrated this by showing, that if the temperature of a hot-house be raised only five degrees, viz, from 75° to 80°, whilst the air within it retains the same degree of moisture, a plant that in the lower temperature exhaled fifty-seven grains of moisture, would in the higher temperature exhale one hundred and twenty grains in the same space of time.

Plants, however, like animals, can bear a higher temperature in dry air than they can in air charged with vapor. Animals are scalded in the latter if the temperature is very elevated, and plants die, under similar

circumstances, as if boiled. MM. Edwards and Colin found kidney beans sustained no injury when the air was dry at a temperature of 167° but they died in a few minutes if the air was moist. Other plants, under similar circumstances, would perish probably at a much lower temperature; and the fact affords a warning to the gardener to have the atmosphere in his stoves very dry whenever he wishes to elevate their temperature for the destruction of insects or other purposes.

Some plants like some animals, are able to endure a very high degree of temperature. Sir Joseph Banks and others have breathed for many minutes in an atmosphere hot enough to cook an egg; and I have myself traveled in Bengal breathing air, without inconvenience, which rendered the silver mountings of my green spectacles too hot to be borne without their occasional removal.

So do certain plants flourish in hot-water springs of which the temperature varies between the scalding heats of from 150° to 180° Fahrenheit's thermometer; and others have been found growing freely on the edges of volcanos, in an atmosphere heated above the boiling point of water. Indeed it is quite certain that most plants will better bear, for a short time an elevated temperature which, if long continued, would destroy them, than they can a low temperature. Thus a temperature much above the freezing point of water, to orchidaceous and other tropical plants, is generally fatal if endured by them for only a few minutes; whereas a considerable elevation above a salutary temperature is rarely injurious to plants. But this is not universally the case; for the elegant *Primula marginata* is so impatient of heat that, although just about to bloom, it never opens a bud, if brought into a room in which there is a fire.

The temperature should always be regulated in our hot-houses, with a due regard to the light. At night it should be so low as to put the sap into a comparative state of rest; and in dull days the temperature should be full 10° lower than in those of bright sunshine.

REMARKS, BY PROF. MAPES.

The sources of heat are not so well understood as its effects. Chemical changes are continually going on both in plants and soils, and but few of these can occur without rendering *latent heat, present or sensible heat.*

Most substances contain heat which is *latent* and which may be rendered *present*, or *sensible*, heat by lessening the bulk.

Thus sulphuric acid may seem cold to the touch, but if one gallon of this acid be mixed with one gallon of water, the one will be partly absorbed by the other, and although the result will equal the weight of both, the bulk will be much less; while the latent heat belonging to the missing part of the bulk, will be sensible heat to the mass, and thus the mixture will be nearly as hot as boiling water.

Such liberations of heat must take place, whenever two substances combine which occupy less space after their combination, than when separate, and such combinations are continually going on both in the soil and in plants.—*Working Farmer.*

BOTTOM HEAT.

NATURALLY the temperature of the soil always bears a due relative proportion to that of the air. When the temperature of the air decreases, that of the soil also decreases, but very slowly; and when the atmospheric heat increases, that of the soil also gradually rises. Bottom heat, or heat applied below the roots of plants, is the artificial mode of imitating this proceeding of nature in our hot-houses, and other structures of that kind. If the temperature of the soil be too cold in proportion to the temperature of the atmosphere, the roots are not stimulated sufficiently to imbibe food as fast as it is required by the branches and foliage, and as a consequence the leaves or fruit will fall or wither. On the other hand, if the temperature of the soil be too great in proportion to that of the atmosphere, the roots absorb food faster than can be elaborated by the branches and leaves, and as a consequence, over luxuriant shoots, and an extra development of leaves are caused, instead of blossoms, and a healthy progress in all the parts.

Obviously every plant will have a particular bottom heat most congenial to it. Plants growing in open plains, as at the Cape of Good Hope, will require a higher bottom heat than those growing in the shade of the South American forests, though the temperature of the air out of the shade may be the same in each country. That gardener will succeed in exotic plant-culture best, who among his

other knowledge has ascertained the relative temperature of the air and soil in which any given plant grows naturally. At present such information is not attainable from actual observation, but it is not so difficult to ascertain the maximum and minimum temperature of the air of a country; and this being obtained, the gardener may adopt this as a safe rule. Let the bottom heat for plants of that country be always 5° higher than the average temperature, or if the average maximum temperature of the air only be known, let the bottom heat be less by 10° than the *maximum* temperature of the air.

Dr. Lindley very justly observes upon this subject, that "we have doubtless much to learn as to the proper manner of applying bottom heat to plants, and as to the amount they will bear under particular circumstances. It is probable that in hot-houses plants will not bear the same quantity of bottom heat as they receive in nature, because we can not give them the same amount of light and atmospheric warmth; and it is necessary that we should ascertain experimentally whether it is not a certain proportion between the heat of the air and earth that we must secure, rather than any absolute amount of bottom heat.

It may also be, indeed it no doubt is, requisite to apply a very high degree of heat to some kinds of plants at particular seasons, although a very much lower amount is suitable afterwards; a remark that is chiefly applicable to the natives of what are called extreme climates, that is to say where a very high summer temperature is followed by a very low winter temperature; such countries are Persia and many parts of the United States, where the summers are excessively hot, and the winter's cold intense. The seeming impossibility of imitating such conditions artificially, will probably account for the difficulties we experience in bringing certain fruits, the Newtown pippin, the cherry, the grape, the peach, and the almond, to the perfection they acquire in other countries."

Theory of Horticulture.

We have introduced the above to show the difference between "Bottom Heat" proper, as used with exotic plants of southern origin in hot houses, and the same term often erroneously used by writers on outdoor culture.

Many of the English writers on Agricultural Chemistry, in endeavoring to prove that Liebeg was wrong in recommending the use of inorganic constituents alone for the raising of crops, and trusting to atmospheric influences for the addition of organic portions, assert that without *bottom heat*, these inorganic amendments alone will not nurture plants in naturally poor soils, and this conclusion they draw from the fact, that any fermentable manure buried deeply, and the inorganic amendments alone added to the top soil, caused good results. Could they have buried an iron pipe heated by steam, instead of fermentable manures, to generate heat, they would have found that heat was not the quality required of the fermentable mass, for with the pipe in a barren soil, with inorganic amendments only added, the results would not have been favorable. It is the *ammonia* liberated from the fermenting mass which gives vigor to vegetable growth, and enables it to appropriate the inorganic amendments to the making of plants.

A more recent set of theorists argue, that no amendment, however deficient in the soil, will prove effective, unless something exists to cause fermentation. For this adage let them read, *nitrogen or its compounds* must be present, and they will prove correct.

When organic remains are decomposing in soils, nitrogen in the form of ammonia is one of the products, and if all the inorganic constituents of crops be also present, then crops of maximum quality will result, and similar results may also be obtained by adding to the inorganic constituents of plants, any of the soluble salts of ammonia. It is for this reason that Peruvian guano, rich in inorganic constituents, and *ammonia*, is so immediately effective.

When Liebeg sent his patent manures to England for the wheat growers, composed of the missing inorganic constituents of English soils for wheat growing, if he had directed that two pounds of sulphate of ammonia, and one barrel of charcoal dust or decomposed peat, be added to each barrel of his manure, it would not have failed, nor would the English chemists have overlooked his high merits merely for the want of this slight addition.

Our readers, then, will bear in mind, that when they add the missing inorganic constituents to their soils, which they may do

cheaply, they must also add something containing ammonia, or ammonia itself, to insure full action. Sometimes the inorganic constituents which must be added, include such as will decompose organic matter already in the soil, such as lime, soda, potash, etc., etc., and in such cases the ammonia results from such decompositions, but in either case the farmer

should supply his surface-soil with the means not only of retaining the liberated ammonia, but also of receiving new portions from the atmosphere. The modes of doing this by charcoal dust, decomposed peat, etc., we have so often described, that it need not be repeated here.—*Prof. Mapes.*

SONG ON THE RETURN OF SPRING.

Now time throws off his cloak again
Of ermined frost, and wind, and rain;
And clothes him in the embroidery
Of glittering sun, and clear blue sky.
With beast, and bird the forest rings,
Each in his jargon cries or sings;
And time throws off his cloak again
Of ermined frost, and wind, and rain.

River, and fount, and tinkling brook,
Wear, in their dainty livery
Drops of silver jewelry;
In new-made suit they merry look;
And time throws off his cloak again
Of ermined frost, and wind, and rain.

CHARLES D'ORLEANS, 1430

THE BLOOMING OF VIOLETS.

BY REV. JAMES GILBORNE LYONS, LL. D.

Aye! cast these gloomy thoughts aside,
The genial spring is here;
She comes with all her violets,
To bless another year.
Lo, rising at her welcome voice,
They steal in gladness out,
And, wished for long, the light warm south
Is harping all about.

By garden walk, and rustic fence,
Fair bush, and rude gray stone,
They laugh among the leaves and grass,
In starry-clusters strewn.
Retiring from the gaze of men,
They lurk, a bashful race,
But every breeze that wanders by,
Reveals their hiding place;

While, heedless of their own sweet worth,
They quaff the shining dew,
Or catch, from God's eternal arch,
Its deep and stainless blue.
Go, mark thou well the scents and dyes,
To them so freely given,
And own that weak and lowly things,
Are yet most loved of heaven.

Then drop this weary load of care,
Be meekly, glad as they,
Nor fear to live on earth unseen,
To pass unseen away.
Learn thou with joy to stand or fall,
Where sacred duty leads,
And prize above renown or gold,
Pure faith and holy deeds.

MANAGEMENT OF ORNAMENTAL FLOWERING PLANTS FOR MARCH.

As we are fast approaching that interesting season, Spring, we shall be most likely to realize a change in the temperature. It is rarely the case at this period of the year, that we do not have weather much milder, and consequently more congenial to the

growth of vegetation generally, and flowering plants especially, than has been experienced during the previous two or three months; and in consequence of a change of weather, plants will naturally stand in need of an increased quantity of water, observing

that only a slightly increased quantity will be necessary, and that you can easily transcend the proper limits in this particular.

At this season of the year, when the weather is pleasant, you should admit a free and liberal supply of air to your plants. If that attention and skill which ought to be bestowed upon them, have not been neglected during the last three or four months, the assiduous cultivator may with much certainty, anticipate being rewarded by the exhibition of a rich and interesting profusion of elegant flowers, which can not fail to be an ample remuneration for all the labor he has incurred on their account. On the first appearance of dead or unhealthy leaves upon your plants, be careful to pick them off, and thus rid them of that which, if permitted to remain, would detract so much from their beauty. There are also several young plants which, should the cultivator desire to impart the greatest possible degree of vigor of growth, health and interest, ought to be shifted into pots of larger size. Adherence to this recommendation should be strictly attended to, as very much depends upon it. I will here remark to the cultivator, that in the process of shifting plants, they must exercise great judgment and observation to enable them to discriminate between those that do require it and those that are not in a condition to be shifted. There are conditions of plants in which it will not be advisable to remove or disturb them. When plants are just coming into bloom, they ought not to be disturbed, (there are exceptions to the general rule), but the well informed judgment of the cultivator will afford all necessary light upon this subject.

Tulips, Crocuses, Hyacinths, Jonquils and Lachenalia, about this time should be in full bloom; they must be kept near the window and from under the shade of other plants. They will require an abundance of water while in blossom. Re-pot your Camellias

as soon as they are done flowering—compost three parts loam, two leaf-mold, and one sand. You may now shift the following plants if you wish to encourage their growth, into pots one size larger than those in which they now are—Verbena, Myrtus, Linum trygynum, Chorpzema, Pittosporum, Geranium, Nerium, Alonzoa, Calceolaria, and Roses.

There are many others of a similar character to the above, that may be shifted. You must be careful in repotting your plants that you do not break the ball of earth in which they are growing. The following may also be shifted: Salvia, (Sage,) Ericas, Aloysia citrodora, Rhododendron, Alstræmeria, Lobelia, Manettia, Lychnis coronata, Plumbago, Lavendula, Hydrangea, Fuchsia, Clerodendron, frequently known by the name of Valkmeria, Clematis and the Pomegranate.

There are many plants which are not shifted or repotted, that would be benefitted by a top-dressing; by this I wish to be understood that where the strength of the soil has been washed out of the top of the pot by frequent waterings, it should be replaced with fresh compost. Those plants which do not require shifting, repotting or top dressing, should have the surface soil stirred up, this will allow the air to penetrate to the roots of the plants, which is of great advantage to them. Give water sparingly to those that are repotted during this month.

In order to attain any degree of excellence or beauty in your collection of plants, they will at least require a reasonable portion of your time in their care and management, without which interest and attention, their health can not be maintained nor their beauty preserved; but if you are not derelict in your attention to them, you need fear no disappointment of your most sanguine hopes and expectations.

THOMAS SHEREN.

[*Cincinnati Commercial.*]

The Vineyard.

ADDRESS OF THE PRESIDENT OF THE WINE GROWERS' ASSOCIATION.

Gentlemen,—

ALLOW me to present to you a brief history of the treatment of vines by the Romans, written by Junius Moderatus Columella, who lived in the first half century of the Christian era. Any one who thinks that their mode of planting and pruning the vine was imperfect, will be much mistaken, as they appear to have possessed a perfect knowledge of the properties of the vine. And, strange to say, we learn from V. Babo, that the German wine societies, by long study, comparison and experiments, adopted some "new methods of treatment," which had really been long used.

Columella commences thus: "any one who wishes to lay out a vineyard, (called Arbustum, from being trained upon trees), should have a vine-nursery in the neighborhood of the intended vineyard and with a similar soil. Vines intended for a low, wet ground, have to be raised on one of a similar character, or they will rot. The soil for the nursery should be trenched two feet deep in February or March.

Each kind of Vines should be separate; cuttings with old wood on, grow better, but fail earlier. The middle cuttings, with close eyes, are the best; these should be cut clean and smooth below the knot, with a sharp knife, and great care is to be taken not to injure the eye; they should then be dipped in cow manure and laid in a well manured and trenched soil, so deeply that not more than four eyes are covered with ground, and at a distance of one foot apart. When growing, only the necessary shoots are allowed to remain; the ground should be kept clean; in the second year they must be cut back, in the third they are ready for re-planting. The best soil for the vine is a light one, with a moderately humid subsoil; ground that cracks with hot weather, is unfit for vines and trees.

The mode of trimming the vineyard is,

first on trellises, second trailing on the soil, third in the shape of small trees, self-supporting. The vineyard should be trenched three feet deep, but some only make ditches. The closest are five feet apart, the widest seven to eight feet, and occasionally ten; the vine to be tied on the east side of a small stick, and a well manured soil should be put about them, the hole is not to be entirely filled up before the third year.

The first year let all the eyes of the young vine break, when of four fingers length break out all but two. The second year only one, the best branch is left, which may be brought into shape the third year. When trailing on the trellises, two of the eyes nearest to the ground are blinded or broken off; the three above are allowed to grow, and the rest of the branch is cut off.

If the vine is to support itself, branches (espalier like) are allowed to grow from all sides but not more than one eye is left to each branch at the trimming. About the 15th of October the soil is drawn from the vines. The lateral shoots may be taken away during the winter. Every third year old rotten manure should be brought around the roots, pigeon manure is preferred. After the 13th of April the ground is again drawn up round the stocks. Ten days before the time of flowering the superfluous shoots are to be broken out. The points of the bearing branches are shortened in. The grapes hanging to the east and south should be covered from the sun. So soon as they change their color, it is time for the third hoeing, which should only be done early in the morning, and never when the soil is wet. Hoeing is preferred to plowing."

In reviewing the mode recommended by Columella, we have to acknowledge that the ancients took more care in selecting their cuttings, and particularly in setting them, and were more careful to have a similarity of soil in view. These different modes of trimming the vines are still in use; the trailing method in Spain and Italy and the self-

supporting in Hungary. His mode of breaking out and shortening, before the time of flowering, is the method which has been recommended for about ten years by Mrs. Leonhard, in Manheim, and now everywhere adopted in Germany, as by it the grapes drop less and ripen more perfectly.

Columella does not mention the pinching off the lateral shoots, because he wrote for the South, where it is even necessary to cover the grapes. The breaking out of extra shoots is also recommended in the work of our worthy and enterprising fellow member Mr. Robert Buchanan, as adopted by his German vine dresser. I hope the breaking out of the side shoots will be here dispensed with, as they are needed in ripening the eyes and the wood; their leaves take up the dew, in dry seasons they assume the functions of the principal leaves when these are destroyed by hail, insects or otherwise. They are also necessary for elaborating the different juices, which are carried by the descending vessels to the root, there to undergo the necessary changes with other articles taken up by the roots, and then by the ascending vessels, again to be distributed to the fruits and other parts of the plant. In Germany, where the sun does not shine so hot as here, they break out more laterals to admit the heat and light, while here, we have to protect the plants against the direct rays of the sun.

Allow me, gentlemen, to suggest for your discussion some propositions, by which we may be guided this year, the adoption of which may prove useful, and bring our society to the stand she ought to occupy as an institution, by distributing the results of our experiments, founded on practical and scientific investigations, in cultivating the vine, and preparing a healthy drink, which may save our country millions of dollars, now yearly sent away to other lands, for

mixed liquids called wine. By introducing a cheap, good, natural wine, whisky and brandy and other deleterious articles, may be dispensed with, the habits of the people will be changed, and we shall see less drunkenness, as it is a well known fact, that in wine growing countries drunkards are very seldom found.

As we have in our society high minded generous and disinterested members, who, with indefatigable zeal, have promoted the distribution and cultivation of the vine for a number of years, I do not doubt that they will also be glad to support measures, which will bring our society to a higher stand; I therefore propose:

First. Publishing the different modes of pruning and training the vines, and having them all fairly tested for a number of successive years.

Second. Publishing monthly the different parts of the work to be done in the vineyard as a Vineyard calendar.

Third. Publishing the different modes of fermenting the wine, and its treatment in the cellar.

Fourth. To induce wealthy merchants at home and abroad, to invest their capital in our wine, so that by a competition for the produce, a fair price may be realized by the maker, who may thus always find a ready sale, and not become discouraged by the low state of the market.

Fifth. Chemical analyses should be made of our soil, of the wood and leaves of the vine, and particularly of the fruit, from the beginning to the time of its maturity.

On the three first propositions you do not need a comment, to the fourth I have to remark, it would be beneficial for the Wine dealers to open large cellars here, and take the sweet must from the vine dresser, and ferment it in their own cellars, under regular treatment, by which means the wine

would be made of a more equal quality. The man who dresses the vine, and he who understands the treatment of the wine in the cellar are, in Europe, separate persons. Here, among our vine dressers, from a want of good cellars and casks, and from lack of proper treatment, I have found the best must converted into a liquid not good enough for vinegar, and too bad to be called wine.

To proposition No. 5, I will call your attention particularly. In the compilation of our worthy member, Mr. R. Buchanan, I find analyses of our soils, by Messrs. C. Whittlesey and A. Randall, giving

Water, - - - - -	2.00
Oxyde of iron, - - - - -	0.30
Carbonate of lime, - - - - -	2.74
Vegetable matter, - - - - -	13.80
Earthy residuum - - - - -	81.16
Total, 100.00	

Here you have the number one hundred exactly, but I can not believe these gentlemen have used a single test, or they would have found a different result. What do they mean by 81.16 earthy matter, when for certain plants it is necessary to know the exact proportion of *clay, lime, and silex*

contained in the soil. Where are the soluble parts of the soil? the potassa and soda which are so necessary, particularly to the vine, since 1000 parts of the matter of the wood and leaves contain 70.44 of potassa and 92.00 of soda. I am sure the members of this society can not believe, that vines would flourish in a soil deficient in these ingredients. The principal object of analysis is, to find out what chemical parts are taken up by a plant, and before your setting it in the soil, to ascertain whether the soil contains these parts, if so, then set the plant out, and it will thrive vigorously. If the potassa were not to be found in our soil the wine would be sour. The potassa of the soil with the tartaric acid of the wine, forms a salt called cream of tartar, which is dissolved in the sweet must, but is precipitated as soon as the vinous fermentation commences, being less soluble in wine or alcoholic mixtures. Respectfully,

L. REHFUSS.

NOTE.—It is surprising that the very imperfect analysis here quoted should have escaped attention previously. It is palpably erroneous as well as deficient. ED.

VINEYARD CALENDAR.

FEBRUARY AND MARCH.

AN important portion of the labors of the vineyard is to be performed during the winter and spring. Some of these operations should have been attended to previously. If not already done, let the vine-dresser immediately proceed, so as to have his work disposed of before the hurrying season of advancing spring, which will furnish him enough labors of its own.

Osiers.—A good supply of willow twigs should be provided, and if not already secured they should be cut at once, tied in bundles and stowed away in a cool cellar.

Pruning.—Some difference of opinion prevails among our vignerons as to the pro-

priety of winter pruning, some urge the performance of this operation just before the sap starts in the spring, others advise it to be done in the autumn, after the wood is fully ripe, while others recommend that it be done during any *fine* weather through the winter. All, however, agree that it should *not be done* when the wood is frozen hard.

As a good deal of tact and judgment are necessary in this process, general rules only, can be laid down and every one must be guided by his own discretion. In trimming the vineyard, the first thing is to loosen the vine from the stakes by cutting the old ties. Supposing that the stakes have been

set in the vineyard, and the vines are of bearing age, they must be pruned according to the soil and the strength of the vines; if feeble cut back the lowest good branch very close, to secure good strong shoots for next year, and expect few or no bunches of grapes; if strong and healthy, select the largest and stoutest shoot, coming out as low down on the stock as may be, trim off all laterals and old tendrils neatly, and cut it off at six, eight, or ten eyes or buds, be sure not to leave a joint too much.

The lowest best shoot is then to be selected for the spur, and it should be as low as possible; cut it back to two or three eyes, which are to furnish the canes for the next year; let the old wood of the last year's crop, and all extraneous shoots be then cut off smoothly and close to the stock.

These directions are brief and concise; but, as before observed, great judgment is required, or the stock will become too long. Better lose a crop now, on any vine, than incur the risk of losing two or three by getting it too high, which will require it to be cut back to the ground or layered.

Layers.—Should there be an occasional gap in the vineyard, now is a good time to provide for filling it up by a layer from one

of the nearest vines. For this purpose, the trimmer must select a good long branch that will reach to the gap, and leave it for making the layer next month.

Banks and Walls should be repaired whenever the ground will allow working—if the rains or frosts have injured them, they should be made up at once, and all tendency to wash must be checked immediately.

Trenching new ground, which should have been progressing the whole winter, except during the severest frost, must now be completed, as it will soon be time to set the young vines in new plantations.

Cuttings.—The trimmings are all to be collected and at once cut up into slips; this operation may be performed under shelter in stormy weather, and at night—good, sound wood, with short joints are to be selected and cut into lengths of eighteen to twenty-two inches, when it is convenient a small piece of the old wood is left on the base of each cutting, as such are considered most likely to grow. They are now to be tied up neatly in bundles of 250 each and then placed in a cool cellar. Directions for planting will be given in the next month's calendar.

THE HYDROMETER.

THE object of the writer is to introduce the Hydrometer to the notice of the wine-grower—those in general use are more or less accurate in proportion to the delicacy of their graduation. They are mostly graduated and adapted for some particular purpose, which renders them very intricate when otherwise applied.

The most useful instruments are those with a centigrade scale, being universally understood. Experience in the different branches of wine making has enabled me

to compile a set of Tables and a Sliding Rule, which, I trust, will be found useful to those who may feel interested in using them: I purpose to furnish them on very reasonable terms.

The Tables and Rule are both so arranged as to be easily adapted to any variety of hydrometers of different makers. I purpose, also, to furnish good and useful instruments—with thermometers, and every appendage necessary that may be required by the wine maker. This Hydrometer is

made perfectly easy to be understood by reference to the Table or Rule. By observing the number of weights necessary to balance the instrument in the fluid, a reference to the Table or Rule gives the value of the same.

I propose to make some remarks concerning my experience in the use of the Hydrometer and Thermometer in wine-making, etc. In so doing, it is necessary to refer to both brewing and distilling, as they are branches of the same operation, also vinegar-making as well as wine-making, to show the use of the Hydrometer in assisting the judgment.

The first use of the instrument in making wine, is to ascertain the gravity of the must as it comes from the press, this should be noted down at the time, for the must immediately begins to lose its weight in proportion to the formation of spirit by fermentation. This application is doubtless known to all, and is, in many cases, the only use to which the instrument is applied.

Attention to the decrease in weight by fermentation, and the progress it makes in a given time, can only be known by the use of instruments. At this point much may be accomplished, as the state of the ferment being known, it can easily be either retarded or accelerated; and, to this end, the loss of weight by fermentation should be carefully watched throughout the whole process of wine-making.

A knowledge of the amount of acid present is of great value in wine making independently of its influencing the hydrometer by several degrees of specific gravity and this acid, (tartar) is more abundant in inferior must or new wine, than in *good or rich* must: in unfavorable situations the temperature is often too low for the wine to ripen and at the same time the ferment loses much of its vigor, and is not recoverable at the usual heat for good wine, thus

when the gravity is at a stand in new wines the temperature is too low. It is sometimes the case that an increase of gravity occurs at this stage. This will show that acetic acid is forming at the expense of the alcohol. These remarks are scarcely necessary in the case of good keeping vaults or cellars; but in all situations, attention to the state of fermentation is of great importance in the production of good wines.

Brewers are well acquainted with the use of the Hydrometers, and apply them in every stage of their operations, it assists them in obtaining a knowledge of the value of the malt and grain they are using, as well as the state and stage of fermentation, thus enabling them to obtain similar results at all times. The same may be said of Distillers, although the instrument is not so well known to them, it is, nevertheless, equally valuable. Attention to the gravity of the fermenting liquids gives them the value of each kind of grain they may use. And, by fermentation the loss of weight (specific gravity) will give the exact amount of spirits that can be obtained from a given weight of materials.

The heavy duty on British spirits has elicited much useful knowledge on this point. The British Excise are at liberty to charge the amount of duty on the spirits that can be obtained from a known volume of wort—first taking the gravity of the same, and, after the fermentation, the loss in gravity by attenuation; this will give, as before stated, the exact amount of spirits that may be obtained therefrom. Thus, the distiller is encouraged to be well acquainted with his business, or a loss will be the result. To those who are not already familiar with the excise and custom duty on spirits in England, I would add, that British spirits pays an excise duty of 8s. 6d. per imperial gallon, and foreign spirits pays

24s. 6d. customs, for proof spirits of .9200 gravity.

Attention to the foregoing remarks might be useful to the cider maker. New Jersey has no other advantages over the Western States (that I know of) beyond the skill and attention of its people to produce the same results. Much of the New Jersey cider is converted into foreign wine. Nor is New Jersey alone in that respect, as most of the Herefordshire cider is dissolved for foreign wine. On my leaving England I had about one hundred dozen foreign wine sold at auction under the inspection of the Excise, that did not contain more than one third part of the original, two thirds were domestic impregnated with foreign lees. I had to

do this, otherwise lose its value, as I had no license for domestic wine. I mention this to show what may be done. With respect to cider making, I think we ought to encourage every improvement; it is the road to independence and knowledge. [*De gustibus non disputandum est.*]

In the course of the few remarks here made, I have named both Hydrometer and Saccharometer in the instrument I purpose furnishing, they are both united in one, though not usually so. The one is intended for spirits or fluids lighter than water, and the other for heavy fluids above water, say new wines, etc. I have the desire but not the time to add more. Respectfully,

ROBERT BENNET.

W I N E S .

Dr. WARDER:—I discover from a letter of Mr. Allen's, in the Horticulturalist, that Mr. Webster will not permit us "to talk of American wines." On constitutional questions, I hold Mr. Webster's opinion as law; but in judging of wines, I must differ with him in opinion. With a little more experience with our domestic wines, he will change his opinions.

Yet candor compels me to admit, that there are other great men, and esteemed good judges of wine, who are (or, I should say, were) of his opinion. In one of our large cities, during a Horticultural Exhibition, a gentleman invited a large party to spend the evening with him, and had on his table five kinds of the best French Champagne, and the Sparkling Catawba of Cincinnati. There was one gentleman present, deemed the best judge of Champagne in the city, whose opinion he was desirous of obtaining, and meeting him in the crowd, made known his wishes. "I will not comply with your request,"—said the gentleman—"I have

been drinking so many liquors, that I can tell nothing about them," and walked off, much to the annoyance of his host. The host walked into the wine-room, and stated his chagrin to a friend, who was attending to the wine-table. "Oh!" said the gentleman, "I will tell you why he answered you so gruffly: he came to the table, and I made the same request; he complied, gave it a taste, turned up his lip, and said it was passable, for an American wine; but said, 'give me a glass of Heidsieck.' I poured out a glass; he drank it off, and smacked his lips. 'Ah!' said he, 'that is a splendid wine, indeed.' I took up the bottle, turned it round—when the label, 'Sparkling Catawba,' met his eye. He walked off speedily, saying not a word." This gentleman was induced, subsequently, to give the wine a fair trial, and is now one of its warmest advocates. Similar instances have occurred in our own city. Some years since, I deemed this prejudice so difficult to overcome, that I had labels engraved in the German lan-

guage, to put on the bottles. I never used them.

We have yet much to learn; and the quality of our dry wines will be greatly improved, as we now have experienced French and German wine-coopers, extensively engaged in the business, with a view of sending it to our Eastern and Southern cities.

Mr. Bogen, who has ample means, and the necessary enterprise, is manufacturing Sparkling Catawba; and I trust that others will follow his example. The increased cultivation demands an increased number of dealers to purchase from our Vine-dressers, as wine should not be bottled and sent abroad before it is four or five years old.—To keep it in casks that number of years, and improve it, requires a cold cellar, constant attention, and skillful management. It also requires capital.

I had a sample of wine sent to me a few days since, that took a premium last spring. It was undergoing the acetous fermentation, from the cask not being kept full, nor the cellar cold.

The Herbemont and Missouri should both be cultivated for wine. The former should

be planted in a rich, loose soil, four and a half or five feet between the rows, and six or seven feet from plant to plant, and only one bearing shoot left. It is of vigorous growth. The latter should be planted three and a half feet between the rows, and about two and a half feet from plant to plant, and pruned low. It is not of vigorous growth. The first is equal to most of the foreign grapes, for the table, and superior for wine. The Missouri is a good table and wine grape. I had the must, this year, to weigh one hundred degrees. It has more of the saccharine principle than any grape we cultivate, foreign or domestic.

It is desirable to obtain cuttings of all new native grapes of fine character for the table, and test their quality for wine. Our Fox and Frost Grapes are of no value; they have but little juice, and are deficient in the saccharine principle. Minor's seedling Fox is the only exception I have seen.

NOTE.—Mr Wm. Bonser found a grape in the woods, a few miles from Chilicothe, exactly resembling the Isabella grape.

Respectfully,

N. LONGWORTH.

TEMPERANCE AND THE VINE.

WE have long been of the opinion, says the Southern Press, that the best remedy against the love of strong drink—a besetting sin with the Anglo Saxon race—is the free use of pure wine. It is a remarkable fact that in the wine districts of Europe, the people are comparatively free from the brutal habit of intoxication. Among the rural population of France, Italy, Spain, etc., the wholesome light wines in common use, are considered as essential to the table as bread and meat. The same indeed, may be said of all classes. We have heard it remarked in derision, that give a man of this class a piece of bread, a few dry figs or dates, a little sweet oil, and a bottle of claret, and he will feast like a lord and be happy. This mode of living is co-eval with the

introduction of the vine and olive of those countries, and where a man is found indulging in the use of strong drink, he is the subject of remark and commiseration by his friends and acquaintances. A modern temperance reformer, would probably obtain new and valuable ideas upon the subject by visiting Havana. There a temperance society, except by American newspapers, was never heard of. Yet in a population of nearly 200,000 souls it is a rare thing to hear of a Creole or a Spaniard who is in the habit of using distilled spirits. In regard to wines however, especially claret and sauterne, all classes make free use of them at every meal.

We find in the Horticulturist the following sensible remarks:

"Very few Americans, except those who have traveled abroad, estimate properly the moral value of pure light wines—because pure wines very rarely find their way across the Atlantic.

As hocks and clarets contain only about eight or nine per cent. of alcohol, they are far more wholesome than coffee, and the cheap production of such wines, will do more to decrease the consumption of ardent spirits than any other circumstance.—Neither law nor

morals can be brought to bear on the present age so as to force men to be entirely temperate but the introduction of wholesome, pure, light wines, at a cheap rate will, as there is abundant proof in the wine districts of Europe. It is for this reason, as well as because we look upon it as a source of national wealth, that we regard the successful labors of such men as Messrs. Longworth and Buchanan, in introducing and perfecting the wine culture, as worthy of the highest public gratitude."

Rural Affairs.

MACLURA HEDGES.

DEAR DOCTOR,—

My absence from the city during the summer and perhaps the neglect of the "Carrier" since, has deprived me of the "Horticultural Review" since last May. I was, however, some days ago favored with hearing your criticism on our growing Hedges. I do not conceive your observations to be entirely just, although I make my acknowledgements so far as it relates to myself in what I suppose you have reference to but presume you did not see all. In a business so little understood by laboring men in the country and particularly with the frequent changing of hands, it is difficult always to have things done in your absence, just as you would desire. The growing fence you allude to, is on a poor soil, and the pruning was commenced before the roots had strength enough to sufficiently multiply the branches near the ground; but the Osage Orange bears the knife so well, that once well set and rooted, the fence may always be perfected in a couple of years, and probably a notice of the same fence the next summer may lead to better promise.

My object in this article is not however to complain of your stricture upon the cultivation and management of the Hedge, but

to meet some objections to the OSAGE ORANGE PLANT itself, inasmuch as my experience tells me that there is no known plant so peculiarly adapted to the purpose, and so valuable to our Agricultural interests. Its surprising properties are no longer a problem. Some writers are yet disposed to class it among the "Humbugs," and many doubt its utility, but amongst them all you will not probably find much, if any experience.—If rightly managed it makes the best and cheapest Fence in the world—without any special objection whatever.

Believing then, as I do in the extraordinary properties of the OSAGE ORANGE (MacLura) for making LIVE FENCES, I will state what I believe the best mode of cultivation and management, in as few and plain words as practicable, so as to be understood by the inexperienced—with the hope that all interested person may practice, and enjoy its benefits.

In order to make the seed vegetate surely and quickly, they require to be soaked for a long time in warm water—usually three, four or five days, but always until they are very much swollen, and partially sprouted.—The water should be kept warm all the time.

The nursery should be located with care. It should be a rich sandy loam. If you have none such—prepare the best spot you have, by deep and thorough cultivation, mixed with well rotted manure, if not otherwise rich enough—make the drills about a foot apart, and before dropping the seed send to the woods and get some of the richest and sandiest mold you can procure,—drop the seed, and cover with the woods mold an inch or inch and half deep. If the seeds are well soaked—the ground clear and strong, they will all make their appearance before the weeds and grass will start to interfere with them. So soon as they are well up, the greatest care will be necessary to avoid the labor of hoeing and weeding, which can only be done by mulching well with leaves, cut straw, saw dust, or tan-bark. I name the the mulching material in the rotation I think they answer best. The whole nursery should be covered, except only the plants; and put on thick enough to prevent the grass and weeds from appearing; by doing so, all further labor will be avoided,

They are better not to be planted too early in the Spring—the middle of May is soon enough.

The next Spring they are ready for setting in the Hedge—the ground for which should have been well prepared the previous fall, by subsoiling, and manuring if necessary, and again in the *very early* Spring plowed and harrowed and rolled repeatedly till completely pulverized—then drive the stakes,—lay the line and spade the trenches. More care is necessary in *taking up* plants to insure their growth, than is usually observed; and more with this, as it is desirable that every one should grow. The tops may be cut off to six inches, and the roots pruned proportionally. Set the plants in a double row, six inches apart, diagonally—thus * * * * *—a foot apart in each

row making them equal to six inches in a single row. As soon as planted, mulch *deeply* with leaves, straw, saw dust, or tan bark, and they will want no further attention till the next Spring at which time, the pruning commences, and you begin by cutting all off within one inch of the ground—in the middle of June cut all the tops again to within four inches of the former cutting—the next Spring cut to within five inches of the preceding cutting, and again the middle of June to within six inches, and so continue cutting each Spring and June, increasing the distance an inch each time, till the Hedge is high enough. By this means you thicken the Hedge perfectly all the way up and when grown it will require the less pruning from there being no large stalks. By pruning the *tops* only while growing, the side branches become the stronger, they can afterwards be pruned and thickened, till it may be made impenetrable to a bird. The mulching may require some renewing the second year, but afterwards the shade of the Hedge will prevent the interference of the grass and weeds.

The plants should never be set further apart than I have recommended above—particularly in strong soil, as the further apart they are set the stronger they will grow and create so much more pruning after the Hedge is grown, or otherwise be objectionably high. Neither will the roots extend so far when closely set.

The Hedge should be fully protected from stock for the first two years. Moles often burrow under the Hedge, destroying the roots—to remedy this, make the ground “*disking*” where the plants are set, two or three inches lower than the sides, which is found effectual, and the plants flourish better.

The pruning may be made a comparatively small job, by using a strong knife for the purpose, about two feet long. A commo

grass-hook answers pretty well; and some labor may be avoided by pruning in the fall, before the wood becomes hard, in place of the spring. The plant bears it so well, that there is no danger.

The "plashing," "plaiting," or "interlacing," when rightly done, may make a perfect fence, and quite ornamental—particularly while young—but it is expensive; and for common purposes, I would not recommend it further than to stop a gap.

I am persuaded that the plant may be used to advantage much farther north than has been admitted. For the first two or three years the limbs will be severely nipped by the frost, but not to the injury of the fence. Respectfully, WILLIAM NEFF.

REMARKS.—This pioneer in hedging will be attentively read by all who feel an interest in the subject; and no one will object to the space occupied by so good and practical a paper from one who has had so much experience in the subject. The plans of severe trimming, heretofore urged upon the hedger, are here enforced; but the close planting is still adhered to. Others, among whom Mr. Bateham may be mentioned, are beginning to admit the propriety of giving more space for the plants to grow. Mr. Neff's testimony in favor of the *Maclura* is valuable, on account of his extended experience. He was one of the very first to experiment with it here and has since planted extensively at the Yellow Springs where he has some fine fences.

McFADDEN'S HEDGE.

THE writer of the "*New Plan for Hedging*," which appeared in the February number of the Review, appears not to be exactly pleased with the accompanying remarks by the Editor. They were intended not to cast any imputations upon the hedger, who appears to have had an extended practice in making live fences, and who was commended for his stepping out so boldly from the trammels of the old custom of close planting, and a fear only was expressed that he had gone to the other extreme. I know, also, the difficulty of pegging down a strong shoot of *Maclura*, so as to have it close upon the ground, such shoots will "*sprng*" up, and thus leave a cavity beneath them.

As evidence of the superiority of his plan, he has very kindly cut off and sent me a portion of a plant of the "Osage Orange, laid down in the spring of 1851, it measures 7½ feet long, has over fifty shoots, produced from the eyes, thus making," he claims, "a closer and better hedge than if the plants,

were only set six inches apart." He further remarks, that "the plant from which he took this specimen measured the same length in the other direction, so that one single plant makes a hedge fifteen feet long."

Now, I am glad to find that I was not mistaken in my assertion, based upon previous observations, and upon physiological principles. The evidence is before me—here is a strong cane of *Maclura*, which has been "laid horizontally"—in the first place it is arched upwards, sufficiently to allow a small animal to pass beneath it. In the next place, although it have fifty branches, those nearest the bend are strongest, and will remain so—those beyond, irregular, and somewhat feeble, will become more and more insignificant from year to year.

Maclura is a great Hedge plant, but we should not expect from it impossibilities, nor that it will be exempt from the operation of the laws of nature, which can not be easily or safely infringed upon.

Miscellaneous.

PECULIARITIES OF THE CLIMATE, FLORA, AND FAUNA OF THE SOUTH SHORE OF LAKE ERIE IN THE VICINITY OF CLEVELAND, O

BY J. P. KIRTLAND.

VERY erroneous opinions are entertained even by intelligent people, respecting this section of country, so far as its climate and the species of the animal and vegetable kingdom are concerned. A series of observations, embracing a period of ten years, have disclosed some interesting facts upon this point.

The locality where these observations were made is situated five miles west of Cleveland, one-half mile from the Lake, 150 feet above its surface, and fully exposed to its influence. During that period the temperature has in no instance fallen below zero; while at Columbus, Marietta and Cincinnati, situated from 120 to 150 miles to the south, it has been frequently sunk to -5° , and has occasionally fallen to -10° , at some of those places. Their latitude is as follows to wit:

Cleveland	-	-	$41^{\circ} 31'$	North.
Columbus,	-	-	$39^{\circ} 57'$	"
Marietta,	-	-	39°	"
Cincinnati,	-	-	$39^{\circ} 5' 54''$	"

The more tender vegetation is usually cut down in all northern Ohio—a few localities excepted—within five days of Sept. 25th.—The lake shore is an exception. Dahlias, Maize, and Sweet Potatoes generally killed simultaneously here, and at Cincinnati—never before the 25th of October, and sometimes not until late in November. In one instance, at least, the lake shore escaped two weeks later than did Cincinnati frequently.

At the present moment, October 25th, vegetation is as verdant and thrifty as it has been at any time during Autumn, though it was cut down through the West generally several weeks since.

The foliage of the fruit and forest trees, having subserved its purposes, is falling without the intervention of frost, and the wood of the more tender trees, such as the Peach and Cherry has attained a maturity that will render it sufficiently hardy to withstand the impressions of cold during

Winter. This occurring annually, gives to those trees a degree of vigor health and productiveness, not to be met with in localities where their growth is suddenly arrested by frosts, at a period when they are immature.

In the middle and southern section of Ohio, Spring sets in during the month of March—perhaps earlier. The warm winds blowing up the valleys of the Mississippi and Ohio, in conjunction with other causes, bring forth vegetation earlier; but cold weather and disastrous frosts too often follow.

While these changes are progressing in these parts of the State, Winter will remain steadfast at this point. Little advancement will be made by Spring so long as any considerable bodies of ice float upon the lake, even as low down as Buffalo. No sooner do they disappear, than Spring sets in with a reality, and vegetation puts forth with *sub-arctic* rapidity.

The lake is rapidly imbibing heat at this season and its condensing vapor or climate becomes a safeguard against any subsequent vernal frost. Its influence was manifested in a satisfactory manner early in the present season. On the 1st of May, Spring seemed to be fully established; fruit trees had blossomed, and in some localities young fruits had formed. The morning was cold and the temperature declined during the day and evening. At two o'clock P. M., it was 48° Fahrenheit; at seven, 34° ; and at nine 32° . The atmosphere was calm and clear, indicating to an experienced observer the approach of a destructive frost.

At ten o'clock, P. M., it had risen to 40° ; a heavy cloud of haze hung about 20° above the lake, and soon overspread the whole horizon. The morning of the following day was warm and misty; by twelve o'clock H. M., it was clear and Spring-like. Not a fruit germ was injured on the lake shore. A different state of things occurred throughout the West and South-West, where no local influences interposed. The temperature

steadily declined without intermission during the day and night, down to about 26° . The day following was cold and blighting, and fruits were generally destroyed.

The mode by which the lake exerts its influence on such occasions do not appear to be uniformly the same at different times. On the approach of a cold night as in the instance above noticed, the warm emanations condensing may give off caloric, and obscure the atmosphere with haze, mist, or clouds, then no frost will occur: [because radiation is arrested as by a cloud screen.]

Under circumstances apparently similar, on the approach of a cold night, neither haze, mists, nor clouds may form, but a stiff breeze springs up, and the stars become unusually brilliant. The thermometer vacillates between 32° and 38° , rising with the gusts of wind, and falling during the intervals of calm. Then no frost will appear: [because of the breeze being loaded with vapor that gives off its latent heat to all objects as it condenses.]

Again, none of these modifying causes may intervene, but the temperature may fall below the freezing point, ice may form on the surface of the water and the expanded fruit leaves and blossoms congeal. Under such circumstances, the first rays of the rising sun, the next morning, will be arrested by a haze, which will soon thicken, and before noon a warm rain will probably fall. The frost will be abstracted so gradually from frozen vegetation as not to impair its vitality.

These contingencies have all occurred within the period of our observations.

The year 1834 proved an exception. The general cold prevailed over the local warmth of the lake, freezing weather continued two or three days, and fruits were cut off even on the shore of the lake.

In Autumn this great body of water begins to part with its warmth to the colder incumbent atmosphere, and the process continues during the Winter. While its progress is most rapid, strong southerly winds prevail at the earth's surface, and volumes of clouds at a high elevation, may at the same time be moving rapidly in an opposite direction.

These counter currents have sometimes given origin to a phenomenon in the city of Cleveland, not well understood by all of its good citizens. The vane of the lofty spire of the Baptist Church standing on a high

ridge of ground, may point steadily to the North, while that on the low cupola of the 1st Presbyterian Church which is situated on a less elevated plateau, may be directed to an opposite point of compass with a stiff southerly breeze at the same time.

It has been surmised that water spouts are most common when there is great inequality of temperature between the water and the atmosphere. Their more frequent occurrence at such times may have been dependent on other causes.

Cool north winds begin to prevail about the middle of October. The lake changes its hue from green to slate color, varying as the temperature is warmer or colder, and ultimately to a hue almost as dark as ink, at times when the sky is obscured with heavy clouds.

The emanations from the lake then begin to condense and pass off to the South, in the form of thick clouds, without discharging, at first much rain. About the 20th of October the cold from the North seems to gain the ascendancy; squalls of rain, hail, and rounded snow appear alternately, with intervals of clear and warm weather.

These squalls always precede the Autumnal frosts. Our gardeners feel no apprehension for their tender vegetables till these premonitions have appeared.

Common observations as well as the more sure test the rain Rain-gauge, show that larger amounts of evaporation from the lake are carried South, where they condense in the form of rain and snow, than fall upon this vicinity.

During Winter comparatively little snow falls, and still less accumulates here, though it may be abundant on the higher grounds, 30 or 40 miles in the interior.

This region is also not so frequently favored with showers in Summer as is the central portion of the State. Long and severe droughts often prevail, but are in part counteracted by moisture in the atmosphere. This quality sustains vegetation, and also imparts a blandness and freshness to the atmosphere during the hottest days of Summer, very observable on approaching the lake from the interior. During that season it is peculiarly pleasant and invigorating to invalids, although equally harassing to them during the Spring season.

The indigenous vegetation of this vicinity

is of rather a Southern type—shown in a great measure by the absence of Evergreens, and the occurrence of more Genera, as the *Cercis*, *Ilex*, *Æsculus*, *Nelumbium*, *Gleditschia*, *Magnolia*, etc. Elliot's Botany of South Carolina and Georgia has been found to be a convenient hand-book for investigating our flora. On the other hand, strange hyperborean plants are frequently found, which have been washed down from the far North-west, through the chain of great lakes.

Many of our birds are species whose most Northern ranges of migration have been assigned many degrees South of this, by Ornithologists. The Hooded, Kentucky, Yellow-throated, Wood, Cœrulean, and Prairie Warbler annually rear their young in this vicinity. Trails, Fly-Catchers, and the Piping Plover, have been repeatedly seen here and the Purple Ibis is an occasional visitor. The list might be greatly extended.

Great numbers of the *Sylvacolæ* semi-annually congregate here, during their migrations, and seem to make this a resting place, both before and after passing the lake. More Northern species occasionally resort here during Winter, either for the purpose of obtaining food, or are driven by storms: such are the Pine-Gross-beak and the White Owl. The Bohemian Wax-wing visits us almost every Winter, and sometimes in large flocks. The Pine Finch is described, by some Ornithologist as resorting to the United States only at long intervals, and during Winter. It visits our gardens and grounds in numerous flocks, every season, early in July, and remains here till the ensuing spring. The young at their first appearance, still retain much down about their plumage, and can not have been long absent from their nest. The food of these birds is aphides during Summer, and at other times small seeds, of grasses and other vegetables.

The Insect tribes still more strikingly show Southern affinities. The *Papilio cressphontes* figured and described by Boisduval and Le Conte as the *Pap. Thoas* has been repeatedly taken here, though it has been considered as exclusively Southern in its resorts. In the South the larva feeds on the Orange and Lemon—here, Maj. Le Conte informs me, it lives on the Hercules-club,

The *Papilio Ajax* and *Marcellus* have also been described as Southern insects; and the late Mr. Doubleday located the former exclu-

sively in Florida, and fixed the most Northern limit of the latter in Virginia. Still they are common at this point, and subsist, in the larva state, on the Papaw. An undescribed species of *Libythea* has been taken in Northern Ohio; it has been found, also, in South Carolina and is without doubt legitimately a Southern species.*

The *Chærocampa tersa*, an elegant miller, was taken in our garden, in the month of May last. Dr. Harris describes it as a native of South Carolina, where it feeds on a species of plant which does not grow at the North. The food it finds as a substitute, has not been ascertained.†

NOTE.—Since writing the above, a lower degree of cold has been experienced throughout the west than occurred during the ten years preceding.

On the 16th and 17th of December, ult., the temperature was as follows, viz:

	Dec. 16.	Dec. 17.
At point of observation		
above designated,	-6 . . .	-5
Painesville,	-8 . . .	—
Sandusky,	-8 . . .	—
Elyria,	12 . . .	—
Ravenna	-12 . . .	—
Akron,	-14 . . .	-17
Zanesville,	-9 . . .	—
Columbus,	-5 . . .	—
Marietta,	-3 . . .	-2
Cincinnati,	-4 . . .	-3

This schedule places the extreme of cold six degrees lower on the margin of the Lake, than was stated in the foregoing article; yet the modifying influences of this body of water were equally apparent on that occasion. It will be observed that at Cincinnati and Marietta, lying in the extreme southern part of the State, with the advantage of high ranges of hills to screen them from the north, and a great amount of local heat generated from animal life and artificial fires, the mercury fell as low within two or three degrees, as at this point, where nothing intervenes to arrest the winds from the

* See the figure and description in No 76 of the Family Visitor.

† See Dr. Harris' very valuable Catalogue of American Sphinges, in Vol. xxxvi, American Journal of Science and Arts. The student of Entomology will there find the history of this intricate family made plain by the labors of Dr. Harris.

open Lake or mitigate the cold, except the warmth of the lake.

At Painesville and Sandusky a little more remote from its influence, the mercury fell to 8° below zero; while in the interior of the State, it sank several degrees lower. During these two days the general cold seemed to contend for predominance with the warmth of the Lake. Even at the low temperature which prevailed warm emanations were constantly arising from the water and exhibited a beautiful phenomenon when viewed from the perpendicular bank of the Lake, which rises 80 feet above its level, at this point. The warm vapors ascended several feet into the air, then condensed, congealed and fell back again in such rapid succession as to cut off from view the water, and to give to the unlimited expanse of the Lake, the appearance of an immense cauldron, waving or boiling like

plaster of Paris parting with its water of crystallization at a high temperature.

It was a cloud of these snowy spicula, thus formed, which enveloped the steamer Mayflower, and resulted in her running ashore. Passengers on board of her, though surrounded with falling snow, could occasionally discern the sun and clear sky overhead. The occurrence of this extreme cold at a time when the Lake contained no ice, and the water was comparatively warm, was extraordinary. Our coldest weather usually happens in February, when the Lake is extensively covered with ice. The northern birds seemed instinctively to foresee or anticipate the approach of a severe winter, for the white Arctic owl, Pine Grosbeak, Red-poll, and white snow birds appeared here in the month of October, an occurrence never before observed.

Ohio Farmer.

ON THE THEORY OF PRUNING FRUIT TREES.

BY LAWRENCE YOUNG, LOUISVILLE, KY.

THE attention of our physiological cultivators and horticultural philosophers is particularly called to the paper of L. Young, which appeared in the *Horticulturist*, and to which the talented Editor has appended some remarks wherein he shows, perhaps, that he does not precisely appreciate the drift of Mr. Y.'s premises and deductions. I can not myself entirely agree with my Kentucky neighbor in all his opinions, having been fully satisfied with the value of judicious pruning by pinching and shortening-in so admirably set forth by the great horticulturist of our country, to whom Mr. Young himself has so handsomely accorded almost the inspiration of Pomona.

There may be a choice of the season for practising the "shortening-in process," but of its value, particularly in the peach, and I may add, especially in *our rich soils*, I can entertain no doubt. Nor do I feel prepared to adopt the suggestion of "antagonism" between the growing and bearing forces,

claimed by Mr. Young. A healthy tree of sufficient maturity has both properties or forces in a just balance when it is in proper bearing condition. Root pruning, by cutting off the supplies of potash and other wood-producing food will, of course, check the production of wood and make a dwarfed tree; but it does not follow that *special* manures, applied about the amputated roots, will replace the plant in the same condition it occupied when its roots were spread over a wider surface, even of "leaner" pastures, by which the wood-elements were freely furnished.

I too have my own theory, which may be more fully developed upon a future occasion, and is now merely introduced: Every plant and every branch of a tree has a great office to perform—the *continuation of its species*—and it appears to be possessed of a sort of instinct, which prompts it to exert every possible effort to carry out the designs of that function during its material life—and

this is the more accelerated, whenever any thing threatens its vitality, whether that be a curtailment of its pasture, by the excision of roots, by constraining them in a pot, by starvation from poverty of the soil, or by a ligation of the trunk or limb, the result of grafting on unkind stocks, or otherwise, the elaborated sap which was on its downward route to make increment of woody fiber, either in the trunk or roots, being interrupted, rises again to the leaves, is again elaborated and then takes its place in the leaf buds, which are thus transformed into germs of flowers and fruit.

I HAVE heretofore suggested to you my design of offering, through the medium of your columns, to the pomological world, the outline of a rude theory, which I have entertained for some years, respecting the existence of two forces or principles in vegetable physiology, and their bearing upon the science of culture, training, and pruning. It has seemed to me that the vague, indistinct, not to say contradictory notions of these forces, to be learned in the books, is a frequent source of injury to the cause of fruit culture at large.

In order to explain the nature of the two forces referred to, and in order to give an example of the manner in which erroneous views of their nature may operate, I shall quote a few authorities setting forth the axiomatic and doctrinal nature of said two forces, according to the present state of the science of vegetable physiology.

Four of the best American authors—Downing, Thomas, Barry, and Kenrick, and at least one English writer, Loudon—agree substantially in setting down to the account of over luxuriance, the cause of unfruitfulness in trees of the orchard or fruit garden; as also in stating that fruitfulness lies in an opposite direction, or at some point towards

feebleness not more remote than debility itself. Downing asserts that fruitfulness or luxuriance, or rather the causes which lead to their development, are susceptible of being excited, either the one or the other, at the will of the operator, by “difference in the mode of pruning.” The others make luxuriant wood growth and fruitfulness two antagonistic extremes, stating in substance, that “whatever tends to promote one retards the other.” These, and such others of the best authors as I am familiar with, all admit an existence of two tendencies in the condition of a tree, one to fruit-bearing, and one to the making of wood-branches; all agree that fruitfulness lies in an opposite condition from wood formation, but in terms so general that the inexperienced are left to infer that the further you recede from luxuriance, the nearer you approach the point of fruitfulness. In fine, high feeding, in one form or other, is set down as the great agent for exciting the system of wood-buds, and starvation for bringing into activity the fruit-buds. Luxuriance and unfruitfulness are used as synonymous terms, and by inference, starvation and fruitfulness seem also to have the same import. My theory of these forces supposes them also to exist in a state of antagonism—that the seat of the wood system is in the trunk, branches and roots, between which there is evidence of a strong sympathy, and of a continued action and reaction—that the fruit-bearing system has no sympathy with the roots, but feeds upon the juices of circulation in the branches, as parasitical plants—that fruit spurs once developed never change their nature, except in consequence of some act of violence, and may multiply like parasitical plants, until their demand upon the juices of circulation even starve out the wood-buds, and finally induce the death of the tree. Fruitfulness I consider a state of normal health in a tree large enough to bear. I

think it exhibits the existence of these two forces in a state of equilibrium, and a departure therefrom, towards either extreme—towards luxuriance or feebleness, is a disturbance of the balance of power—the beginning of a state of disease, the nature of which will entirely depend upon the character of the force in predominance, and must call for remedies in accordance; that is, a tree too luxuriant for fruitfulness will need depletions, while a starving subject would want stimulants and tonics.

In giving an example of the manner in which erroneous notions of these forces affect the cultivator, I will suppose one has, as a subject, a tree unfruitful from too great luxuriance. Suppose he should undertake to cure this defect by lessening the number of rootlets catering for the woody system, by root pruning, would it not be absurd philosophy and a waste of time to fill up with rich manures a trench made for amputating the roots, thus enabling the surviving rootlets to gather from a crib, food in quantities, perhaps, equal to the efforts of the whole system from leaner pastures before amputation.

Again, a tree neither too feeble nor too luxuriant for fruit-bearing, ought not to be pruned unless for symmetry's sake—whilst one needing the knife ought to be considered either as too vigorous or too feeble. How confused, then, must the science of pruning be, when its best expounders direct an annual indiscriminate pruning of trees under all conditions, when the admitted effect of that particular mode of pruning, too, is to stimulate but one of these forces. Yet such cases are in the books, and one of these cases I will refer to, because the distinguished author who exercises, and I think justly exercises a widespread influence over many admiring friends, has in the South and West led some of them into error and disappointment. I would not be understood in this as endeavoring to show

off the gentleman's fallibility. I willingly acknowledge myself his debtor for much, both of pleasure and instruction. In fact, I have thought that none other than an inspired member of Pomona's priesthood could have given readings of the laws of nature so generally true to her text-book, as those rendered by the accomplished author of the *Fruits and Fruit Trees of America*, and I have thought, moreover, that high latitude and New Jersey sand betrayed him into the error alluded to, which is taking the peach tree at three years old, and in March or April of every year during life, shortening-in the branches.

In any cultivated orchard of the Indian corn district, West or South, this treatment is erroneous. It would be wrong, because in such location the tendency of the tree is, at that age, to over luxuriance, and in that case, cutting off the branches to make it less so, would be as though a farmer should attempt to starve out his briars by cutting off their heads in March, when the roots had before them a year's supply, instead of the fated August, when they would be in the midst of a famine; it would be as though he should attempt to reduce the condition of grazing cattle, by diminishing the number of his herds, or increasing the extent of his fields, or the luxuriance of their verdure.

Without great confidence that my remarks will have much interest, other than that of novelty, I propose to consider the appreciable evidences and outward marks, peculiar to the wood system and the fruit-bearing, respectively.

Next, to class the rules for growing, training, and pruning in accordance therewith; reviewing also their aptitude, claiming as I do, to be a great admirer of the true and the beautiful in nature—next to the pleasure of weaving fine theories myself, is that of seeing them stript of their flimsiness by others. I

should therefore like to be set right by any of your numerous correspondents who shall perceive an error in the course of these remarks, and at the same time have patience and inclination for the work.

Louisville, Ky., October, 1851.

REMARKS.—Mr Young appears to have singularly misunderstood the aim of the shortening-in system of pruning, which we have labored to introduce in this country. The main object of this mode of pruning is, to *prevent the tree from enfeebling itself*—partly by regulating the annual crop and partly by forcing it to push out several luxuriant shoots, where it would otherwise only have made one. To quote the precise language of our work on Fruit Trees—"while we have thus secured against the prevalent evil, an over crop, we have also provided for the full nourishment of the present year's fruit, and induced a supply of fruit-bearing shoots throughout the tree for the next season." (Page 459.)

It is straining an inference to say that high feeding is the only course for making wood, and starvation for making fruit, pointed out by the best writers. The production of fruit-buds depends upon the formation and deposit of that *organizable matter* which nature directs especially to this end, and not to the end of growth, and though starvation often forces nature, by cutting off rapid growth, to turn all the accumulated energy of the tree into the production of organizable matter, such is not the operation of secretions in the normal and healthy condition of the tree. That condition lies, as Mr. Young truly says, and as we think all sound writers will be found also to say, in an equilibrium of the vital action of the tree. The most skillful pruners of fruit trees in the world, are the French, and whoever has seen the best pyramidal pruned pear trees in France, must have been struck by the perfect balance between healthy growth and productiveness maintained by the admirable system of pruning practiced on those trees.—[EDITOR HORTICULTURIST.]

Transactions.

The Cincinnati Horticultural Society Has kept up its regular meetings during the last month as usual, but it is a subject of regret with some of the best members, that so much of the time should be occupied by mere business matters, which should be devoted to discussions regarding the advancement of scientific principles and their application to practice, allowing the financial details to rest upon the appropriate officers.

At the monthly meeting, the revised constitution, which was reported in December, accepted and favorably considered, was *definitely postponed!* This must be taken as an evidence of the conservative policy of the society, which, it is sincerely hoped, may preserve it from all impending dangers;—constitution mending is a delicate business, and should be attempted as rarely as possible; if an Association be determined to succeed, they will flourish under any form of government, and if not, no code will bind them to the true course.

Among the fruits exhibited during the month the attention of the members was particularly directed to the Northern Spy, Canada Red, Swaar and Winter Greenings forwarded by Jas. H. Watts, of Rochester, N. Y.; Epps' Sweeting and Hunt's Russet from Mr. Porter, of Danvers, Mass.

Mr. W. P. Fogg presented a jar of "fresh peaches," prepared by the wife of W. R. Smith of East Bloomfield, Monroe county, N. Y., and preserved in their own juice—they were declared to be very good, retaining the fresh flavor of the fruit better than those preserved in syrup in the usual way.

The effects of the severely cold weather begins to attract attention, and members give sad accounts of the injury done to the fruit buds and trees. The peach buds appear to be universally destroyed, as in most other parts of the west; cherries are partially killed, and the same has been observed of the pears. The apples and plums are supposed to be safe. Some think the vine buds are

injured, but this is not the general opinion; time and further investigations will develop the facts.

An examination of wines was ordered by the society, to be held upon the first Saturday in April, under the customary rules, and by the appropriate committee.

FLOWERS have not occupied a very prominent position upon our tables, but John Sayers presented some beautiful Camellias upon the first Saturday in February, and John M'Fadden showed a very pretty bouquet in which was a seedling Scarlet Geranium, Cinerarias, etc.

The American Wine Growers' Association Has held a few meetings, in which the members show that they intend to do something that will redound to their credit. On the regular meeting, the President produced an address, which will be found in another department of this issue. A formula has been adopted, and a person employed for collecting valuable statistics. A committee was also appointed to prepare monthly calendars. Discussions have been had upon different modes of pruning, and training the vine, and managing the vineyard, etc.

New Haven, Conn., Horticultural Society.

[Condensed from the New York Farmer.]

Transactions for the year 1851.—The proceedings fill a pamphlet of forty-four pages, and embrace an account of each weekly exhibition, from May to September, with the names of the exhibitors and successful competitors. Also the Reports of Committees, and an interesting account of the festival, held in connection with the Pomological Society, in the autumn. A list of tax-paying, and also of honorary and corresponding members is given. Among the latter, we notice the names of many distinguished gentlemen, interested in Horticultural pursuits, in different sections of the Union. The tax-paying list, embraces one hundred and eighty names, a very good list certainly for such an institution.

The New Haven Horticultural Society, has been in existence twenty-one years.

The officers are—

President—Charles Robinson.

Vice Presidents—Stephen D. Pardee, Charles B. Lines.

Directors—Nath. F. Thompson, Elizur E.

Clarke, John J. Walter, Carleton White, James Harrison, S. I. Baldwin, N. A. Bacon, Charles W. Elliot, O. F. Winchester.

Recording Secretary—George Gabriel.

Corresponding Secretary—E. H. Bishop.

Treasurer—William Johnson.

Albany and Rensselaer.

The annual meeting of the society was held at the State Agricultural Rooms, February 4th, 1852—V. P. Douw, President, in the chair.

The following persons being nominated were duly elected officers for the ensuing year:

President—HERMAN WENDELL, M. D.

Vice Presidents—E. P. Prentice, B. B. Kirtland, D. T. Vail, Wm. Newcomb.

Secretary—B. P. Johnson.

Treasurer—Luther Tucker.

Managers—V. P. Douw, J. M'Intyre, J. M. Lovett, L. Menand, E. Corning, jr., C. P. Williams, A. F. Chatfield, J. S. Gould, E. Dorr.

Meetings and exhibitions for 1852, are to be held on the 22nd June, 6th July, and 14th and 15th September. Annual meeting 3rd Wednesday of February, 1853.

A Premium list was adopted for the year and committees were appointed on Fruits, on Green-house plants and Green-house Flowers, on Gardens, on Flowers, on Floral Designs, Bouquets, etc., on Discretionary Premiums, on Essays and on Synonyms of Fruits, on Vegetables and on Arrangements for Exhibitions.

Awards were made for fine fruits exhibited at this meeting; and also for beautiful displays of plants and flowers, in which department L. Menand, James Wilson and Mr. E. Corning's gardener, were pre-eminent.

This account is condensed from the Albany Evening Journal, kindly sent by one of the active members.

Exhibition of Winter Fruit.

Rochester, Jan. 19, 1852.

The usual exhibition of Winter Fruits was had in the Mayor's room, in the new Court-house, on Saturday last. Fine specimens were shown of the standard varieties, and an opportunity furnished to test the good qualities of the kinds of Apples, ripe and ripening at this season of the year.—

The show was fine, and the fruit well kept. Embraced in the list were the Northern Spy, Norton's Melon, Hertfordshire Pearmain, Swaar, Canada Reinette, Canada Red, Rambo, Esopus Spitzenberg, Talman Sweeting, Green Sweeting, Baldwin, Seek-nofurther, Rhode Island Greening, Yellow Bellflower, Hubbardston Nonsuch, Newtown Pippin, Holland Pippin, Monmouth Pippin, Ribston Pippin, Fameuse, Pomme Grise, Bourassa, Cornish Gilliflower, Black Gilliflower, Wagener, Jonathan, and Vandervere.

Several specimens of Winter Pears, from Ellwanger and Barry, and from others a few Isabella and Catawba Grapes. The fruit was sent to Albany, to be shown at the State Society's Winter Meeting. This affords members of the State Society, and members of our Legislature, which is in session, an opportunity of seeing specimens of what the different counties in the State produce, and is gratifying to the producers as well as to amateurs.

We assure your readers that our fruits come up fully to the highest standards, and we hope they may be kept so.

Truly, J. H. WATTS.

Oneida County Winter Meeting and Show of Fruit,

Was held in Rome, on the 3d of January, 1852. Present of the Committee, Messrs. E. Huntington, Flusky, Comstock, Grosvenor, Talcott, Leonard, and Doty.

The show of fruit was not so large as the Committee had expected it would be; but of the varieties shown many were beautiful specimens.

Specimens of Baldwin and Spitzenberg apples exhibited by Mr. R. S. Doty, were remarkable for size, quality, and appearance, and worthy of especial mention.—Messrs. Talcott and Leonard presented many varieties of choice fruit.

The Committee were of the opinion that among the different varieties of apples exhibited, the Spitzenberg, both in appearance, for eating, and for general use, were the best and most satisfactory for this season of the year.

E. HUNTINGTON, Chairman.

Condensed from the New York Farmer.

Genesee Valley Horticultural Society.

THE annual meeting of this Society was held in the Court-house, Rochester, on the 7th of February, M. G. WARNER, first Vice President, presided.

The report of the Committee on Fruits was read by P. Barry, Chairman, accepted and ordered to be published.

A verbal report on Entomology was also made by L. Wetherell.

The following gentlemen were elected:

President—Patrick Barry, of Rochester.

Vice Presidents—Matthew G. Warner, of Rochester; John J. Thomas, of Macedon; Henry P. Norton, Brockport; R. G. Pardee, Palmyra; John Donellan, Greece.

Corresponding Secretary—Leander Wetherell, of Rochester.

Recording Secretary—Joseph A. Eastman, of Rochester.

Treasurer—Jas. H. Watts, of Rochester.

Committees on Fruits—on Trees, Shrubs, and Flowers—on Vegetables—on Entomology—on Botany—on Finance—and an Executive Committee were also elected.

At the close of the meeting, the following compliments were passed:

On motion of J. H. Watts—

Resolved, That John A. Warder, M. D., of Cincinnati, Editor of the Western Horticultural Review, and W. D. Brincklé, M. D., of Philadelphia, be elected honorary members of this Society.

On motion of Mr. P. Barry—

Resolved, That the thanks of this Society be presented to the Hon. Levi A. Ward, for the able and faithful manner in which he has discharged his duties as President of this Society for the last two years.

New York State Agricultural Society.

CONDENSED from the "New York Farmer," an excellent country paper, recently commenced in Rome, New York, by E. Comstock—to which I am indebted for much valuable news.—ED. REVIEW.

The Annual Meeting of the New York State Agricultural Society, commenced its session at the Capitol, Albany, Jan. 21st, 1852, the President, John Delafield, Esq., in the Chair. After organization and receiving the dues of members, the report of the Executive committee was read by the

Secretary, B. P. Johnson, Esq. This report presents a flattering account of the doings and prospects of the Society, and was listened to with attention.

The Treasurer's Report was next presented by Luther Tucker, Esq., showing the following condition of the finances:

Balance in the Treasury, last year, - - - -	\$2,413 00
Receipts during the year from all sources, - - -	17,218 25
Expenses for the year, - - -	12,545 38
Balance in the Treasury, 4,674 14	
Add plate and medals, 644 00	
Investment previously, 7,000 00	

Funds available, - - - 12,188

The following named persons were duly nominated and elected for the ensuing year:

For President, HENRY WAGNER, of Oneida.

Vice Presidents—

- 1st District, James Monroe;
- 2d " Lewis G. Morris;
- 3d " Anthony Van Bergen;
- 4th " W. C. Watson;
- 5th " Theodore S. Faxton;
- 6th " O. C. Chamberlain;
- 7th " Charles Lee;
- 8th " J. McElwaine.

Executive Committee—John Butterfield, John B. Burnett, John A. Cory, J. G. Blanchard, Wm. Kelly.

For Corresponding Secretary, Benjamin P. Johnson, Albany.

Rec. Secretary, Erastus Corning, Jr.

Treasurer, Luther Tucker.

The committee also recommended that the next Fair and Cattle Show be held in the city of Utica.

The Show of Fruit at the Society's Rooms, in the old State Hall, was by no means large, but some fine specimens were exhibited. A large number of imitations is on exhibition, which look so natural as to tempt one to taste them.

The following persons were the chief contributors:

David Emory, Ithica; J. H. Watts, H. D. Adams, J. Merritt, John Donnellason, H. Thompson, A. Brown, D. K. Bailey, Thos. Johnson, E. W. Lay, Monroe county.

Peter Singerland, Bethlehem, Albany county, presented a seedling Apple.

R. G. Pardee, Palmyra, 3 varieties, and Catawba and Isabella Grapes.

William Foster, Palmyra, Northern Spy Apples.

Joel Hall, Marion, also contributed four varieties of apples.

After the exercises were closed, an address was delivered by Prof. Norton. It was a production of unusual merit, plain, unostentatious and practical, and showing the relations which agriculture and science bear to each other. We are not given to flattery, nor does Professor Norton need any eulogy from us; but we can not withhold our expression of regard for his valuable attainments, and our conviction that no man in this country is calculated to accomplish more for the cause of improved agriculture, or to render more valuable contributions to science, than Mr. Norton. His address will be published under the direction of the Society.

Wisconsin State Fair.

The following items are condensed from the *Prairie Farmer*: and should have appeared before.

THE show grounds were on the east side of the river and close to the town. About five or six acres were fenced in and provided with suitable pens, stalls, and tents, for the exhibition of animals, and the other articles.

Of the exhibition generally, it may be said that it is in the highest degree successful; transcending I think the expectations of all concerned. Of flowers the show is limited, but excellent, and of fruits the same may be said; though there are kinds enough of apples and very good specimens.

The fruits and flowers were exhibited in a tent which after all was the central attraction of the grounds. Very inadequate preparations had been made for the show of fruits and flowers, whose exhibitors, though few, were numerous enough to have made the crowd stare if they had had half a chance. The fruits were buddled together in glass cases, or piled up in baskets. The exhibitors were Messrs T. K. Phoenix of Delavan, who brought out about sixty varieties of apples—all finely labelled; some pears, and Isabella grapes; Beecher and Bryant of Milwaukee exhibited twenty varieties of apples and three of pears; W. Talcott of Rocktown, fifteen varieties of apples; S. Talcott, Isabella

grapes; C. Hawley, Milwaukie, Fall Pippins; G. A. Ogden, Rock Co., varieties of apples; E. B. Quiner, Watertown, varieties of apples; H. P. Starin, Walworth, J. S. Spaulding, Janesville, J.C. Howard, Milwaukie, apples, and the latter pears and plums; H. Ludington, Milwaukie, apples; G. O. Tiffany, peaches. Could all this fruit have been distributed by kinds on plates spread on a continuous table and decorated, the enthusiasm of these Wisconsin Yankees would have gone up to 600° of Fahrenheit, and then grumbled at the shortness of the thermometer.

The flowers were few and beautiful. Mr. G. Gifford, of Milwaukie, did credit to his city, state and generation. His oval design of evergreen, decorated with assorted Dahlias, Asters, Roses, and so on, was the finest I have ever seen. Messrs Beecher and Bryant, and Phoenix also showed good assortments. These were all. What *did* possess the ladies of Janesville, that they attended not to this department? Are there no fine gardens in this commercial and water grinding city.

There were two addresses; one on Wednesday before the Rock Co., Society by Mr. R. M. Wheeler, and the other on Thursday before the State Society by Chancellor Lathrop of the Wisconsin University. The first I did not hear, the latter was a very finished production; and so far as I could hear, well considered and judicious, advocating the education of the farmer in general, and the establishment of agricultural schools in particular, for the purpose of securing a diffusion of proper instruction through the masses. It seemed to be very well received.

The attendance on the first day of the Fair was perhaps seven thousand, and on the second ten thousand people—counting all who were abroad, on the grounds and through the

streets and public houses. The behaviour of the crowd was extremely orderly and quiet.

I saw but one man intoxicated during the exhibition. The proportion of females old and young, was very large. The women as well as men of Wisconsin were there, and their interest in all that was going on was equally eager.

On the whole, the occasion was a great one for this noble and enterprising State. It is wealth to her reputation, stimulus to her enterprise, and money in her pocket. It is the beginning of great things, *if it goes right*, and there is no reason why it should not. When will our great elephant of a commonwealth, Illinois get under motion?

Autumnal Exhibitions.—1852.

Buffalo Horticultural,*	Sept. 14, 15
Ohio State Fair, at Cleveland,	" 15, 16, 17
Michigan " at Detroit,	" 22, 23, 24
Philadelphia Horticultural,	" 25
N. Y. State Fair, at Utica,	" 7, 8, 9, 10
Cincinnati Horticultural,†	" 29, 30
Upper Canada Agricultural,	
at Toronto,	" 29, 30
Kentucky " at Lexington,	" 9, 10
Indiana State Fair, at —	Oct. 19
Pennsylvania " at Harrisburg.	
Georgia " at —	
Maryland " at Baltimore.	
Pomological Congress, at Philadelphia.	
North-Western Association of Fruit Grow-	
ers, at Dixon, Ill.	
Wisconsin State Agricultural, at —	

* The Summer Exhibition will be held June 22, 23.

† The Spring Exhibition will be held May 12.

Frontispiece.

Olmstead House.

THE Illustration of this number is a representation of a plain cottage, "half farmhouse half rural residence," built for Mr. Olmstead, on a retired shady lane near a Connecticut village; viewed from the S. W.

It is the work of Mr. Wheeler, whose book, "Rural Homes," was noticed in January, from which the description is taken. This style of house combines several advantages, and may please some of our own builders of moderate views.

"Amid a beautiful orchard, and backed by shade trees, stands a cottage home. The building is framed of wood—has a high pitched roof, and is substantially and thoroughly built. A large cellar of brick runs under the whole house, extending even under the verandas, thus making the building at all seasons perfectly dry, and in the summer pleasantly cool. A building half farm-house, half residence—with rooms spacious, and entries convenient both to the domestic offices and to the residence part of the house; a sort of two buildings under one roof—a style of house in very frequent demand in the country.

It will be seen that the peculiar feature about the house is the extreme projection of the roof. In fact, the veranda is shaded by the main roof itself, the latter being supported by framing of a very simple and effective character on the end, and by posts, formed of studs put cross-wise together, and cut and molded top and bottom, at the sides. The sharp gable over the side is framed so that the construction shows externally—this being no sham, but the actual framing of the roof within, the chamber ceilings of that part of the house being lathed upon the curved beams that support the roof. The sides of the house are planked, and their joints covered with battens, the roof being shingled. The heads of the doors and windows are protected from the weather by moulded labels, upon which the battens rest, and though the detail about the building is very effective, no ornamental work is any where introduced which does not serve some constructive purpose of design.

The plan is thus arranged: A veranda floor is on the front and two of the sides, shaded by the overhanging roof above. The house is entered by a door at the south-west angle; this leads into the entrance hall, in which is the principal staircase of the house.

On the right is a sitting room, which is fifteen feet by seventeen feet six inches. From the hall is a parlor, sixteen by nineteen, in which is a large bay window, and of which the French windows open upon the verandas on either side. Behind this, communicating with the sitting-room, is a dining-room, which is also sixteen by nineteen, and opening from which is a large

store-room, fitted with shelves, and a store, and china, and glass-closets, etc. There is a large kitchen twenty-one by nineteen, and the scullery and sink-room. A back staircase leads up to the floor above, and on each side of it are large closets, one into the parlor, and the other into the dining-room. The rooms on this floor are all spacious, their arrangement has been found extremely convenient by the occupants. The chamber floor is similar in its distribution to the ground plan.

The cost of this house may be stated at from twenty-five hundred to three thousand dollars, the margin being left for the amount of labor expended on the outside and inside finishings. As erected in Connecticut, its cost was nearly three thousand dollars, but the workmanship and materials throughout, were all of the highest quality, and the extensive cellaring before alluded to, might not be deemed necessary by other builders; and would, of course, if curtailed, reduce the expense.

Its picturesque appearance attracts great attention, and as creepers become trained upon the open tracery and posts of the frame in front, the cheerful aspect of its southern end will be greatly improved.

Its style is Gothic—so far at least as the high roofs, the pointed arches of the tracery in front, and the character of the labels over the windows—determine any distinctive style. The whole is painted a deep cream color, the bold projections of the roofs, posts, and tracery, casting interlacing lines of shadow that vary the tint most beautifully, and for which reason a light tone of coloring has been chosen. These effects of light and shade would be lost if a darker background had been given as the color of the house."

Editor's Table.

The Editor's Table is groaning under the weight of unacknowledged favors—books, pamphlets, letters, communications—all of which shall be brought up as soon as possible; but the anxiety and determination to issue the Review punctually, has required great effort to bring up the lee-way. My friends must not consider themselves slighted.

The new arrangement of the matter, also requires that every thing should be prepared and appropriately arranged, before it is put into the hands of the printer. My friends will therefore endeavor to forward their communications and advertisements as early as possible in the month.

Correspondence.

Packing Trees For Transportation.

THE following letter tells its own tale, and a sad one it is too. With great reluctance it is brought before the public, but it is a matter in which the people who buy, as well as the dealers, are deeply interested, and the reputation of the sellers is at stake.

It is well known, however, that some of our Nurserymen are perfectly qualified to put up trees and plants in such a manner as to insure them in a voyage to the Pacific or anywhere else. It is also well known that some of our eastern friends, who have high reputation for their accuracy and excellent management in every particular, do sadly disappoint their customers sometimes. But is there not some fault also to be attached to the purchasers, who are often unwilling to pay the extra charge necessary to remunerate the Nurseryman, for the time and labor, and materials needed in judicious packing? The suggestion as to charging for packing and throwing the trees in, is a good one, and were I in the trade I should catch at the idea—it would draw, depend upon it.

DEAR SIR,

My trees, purchased last spring, are all growing; some two or three look rather low-spirited, but with careful nursing I think they will live. I find no difficulty in getting trees to grow that are *packed in good order* as these were; but when trees are badly taken up and lashed together like a bundle of hemp, with the roots exposed to the air, or carelessly thrown into a box to be shipped several hundred miles, I *do* find it difficult to coax them to grow; and, if they grow at all, the time spent in nursing them is worth more than the trees. I ordered a lot

of Fir Trees from New York last spring, for our seminary grounds, from Mr. —, who *charges nothing for packing*. When I opened the box, there were the trees, dry as chips—nothing to protect them, but a few handfulls of moss—no earth at all about the roots. I suppose they were thrown in by some careless hand, for no Nurseryman who cares for his reputation, or is a friend to horticulture, would allow trees to leave his premises in such condition. The result is, only one-third of the trees grew, with great loss of time in looking after them.

I have also received evergreens from Cincinnati, which could not grow because of the careless manner in which they were taken up and packed. I have also ordered seeds of different kinds, “warranted good,” which proved to be worthless. Last season I planted a quantity of Osage Orange seed, and *not one* came up. This season I bought seed of DAIR & Co., and have succeeded well. Such conduct as this, is calculated to retard horticultural progress very much. It should be corrected. Can you not give us a few articles (or lectures rather) in the Horticultural Review, which will have a tendency to correct these errors?—or *gross impositions*! perhaps I should call them.

There are many persons in the country who would like to improve their grounds and gardens, but have abandoned it, because of failures such as I have mentioned.


I think, if nurserymen would change their *advertisements*, it would be better, they might say, “We charge *so much for packing* and throw in the trees.” But enough of such talk for the present.

I will not mention names at present, but if those Fir Trees for our public grounds are not replaced with such as will grow,

then you shall have the names. And also the names of an individual from Hamilton County, who shipped a quantity of Strawberry Plants into this region, represented to be *the best*, which proved worthless. I might fill several sheets relating to such impositions as have come under my notice. *Something must be done to put down such conduct.*

J. B. A.

Window Plants.

 A kind lady correspondent in Michigan, who has previously obliged me by similar welcome favors, closes one of her agreeable letters with an account of *her Flowers*, which are certainly more happy under her kind care than the pinched and starved victims so often seen. I feel quite tempted to accept the polite invitation to visit those snug warm rooms at "Cedar Bank," for the sake of enjoying the company of her parlor parterre and its presiding genius.

She will, of course, understand that the plan proposed last month was intended to apply to winter-blooming plants, and was written for persons near a Greenhouse, and especially for our city folks, who have to contend with the terrible atmosphere of coal-smoke (that would almost choke a thistle,) and for winter blooming plants; for I can appreciate the individuality of an attachment which has grown up towards a fine plant that has been long nursed in the family. Such success as is here mentioned, however, is indeed uncommon, and merits praise; the plants are so different in their habits, too, that we should scarcely expect to see them thriving in the same Greenhouse.—Ed.

I can not let the present moment pass without saying a word about my winterflowers in the parlor. My plants are all in a healthy condition, notwithstanding the extreme severity of this winter.

Your advice contained in the remarks on Mr. Beecher's article in the December No., "to purchase them (the plants) of our gardeners just as they come into bloom, enjoy their sweets, and then send them back, or throw them away," may be very good for city amateur florists—but excuse *me*, my friend, from adopting it. In the first place, we country people have not a Greenhouse, or even a *representative* for one, where we can go and buy, if we wished to. Judge, then, when we are so fortunate as to procure a favorite plant, how precious it is, in our eyes. Why, my Oleander is twelve years old! and though I have to cut it down occasionally, to keep it from the ceiling, yet I could not find it in my heart to throw it away. But I agree with you, better throw them away, than make "parlor victims" of them. I find no difficulty in having fine blooming plants in my front parlor, where there is *no* fire; the heat from an adjoining sitting-room being sufficient for a healthy growth—the thermometer ranging from 65° to 40° at night. I keep only what will stand in four deep windows fronting the east and south, *without* curtains or shade except latticed shutters, on the outside, closed at night. I seldom remove them from the windows except on very cold nights. I am not so particular as Mr. Beecher recommends, in regard to watering the *leaves*—some of them not having been wet this winter; yet they are not dusty. The *roots* are regularly watered when they need it, and always of the temperature of the room, *never* colder.

On the 16th of December, my first Camellia opened its variegated petals, in two beautiful blooms, as if to defy the frost-king, on that coldest day of the last year. Although a small plant, it has, up to this time, expanded its twelfth bloom. Then, there is my sweet Pink and White Chinese Primroses, always so modest and cheerful, with

forest fragrance, reminding one of the odor of ferns on the hill sides. *Daphne odora* and *Salvia splendens* are also blooming in fine contrast. *Heliotropium*, with me, a constant bloomer, shedding its fragrance all around. I have also now in flower Scarlet Geraniums, *Ageratum mexicanum*, taken from the garden last autumn, and *Petunias*, just coming into bloom. Roses I have had since December, and a fine Pasque flower that I am sure will reward my care in April. I am also nursing some California Lupins, that did bloom from seed last year.

You will pardon me, I know, if I demur to your counsel, and keep my pleasant indoor companions still with me—especially as I promise not to make of them “parlor victims.”

R. B. N.

Cedar Bank, Jan. 9, 1852.

Effects of the Cold.

THE morning and night of the 20th of January was the most extreme cold ever felt in Southern Ohio, since the settlement of the State. The valley of the Muskingum seems to have been the focus of this vein of cold air, pouring down from its head to the mouth. At Marietta, at six A. M. the mercury was at -23° , while there is good cause for believing that at one and two o'clock, A. M., the cold was still greater. Five miles above the mouth, at Union, Mr. L. Devoll, an intelligent and close observer, who was up at one o'clock to regulate the fires in his room, says the thermometer was at -30° , and that at six it had risen to -22° . Dr. Bowen, of Waterford, eighteen miles above the mouth, observed his thermometer to be -30° or more, at one o'clock, A. M. A Mr. Maxon, two miles east of Marietta, near the bank of Duck creek, observed his thermometer, at one o'clock, A. M., to be -27° , and -22° , about sunrise. As we approach the summit or head of Muskingum, the cold was not so severe—

and north of that, to the Lake shore, still more temperate.

The effect on plants has been very disastrous. Mr. Devoll is a nice cultivator of fruit; he has about fifty bearing peach trees, all of which are killed, to the ground. The last year's wood, in a nursery of apple trees, is killed, down to the surface of the snow, which was about ten inches deep. In all this portion of the valley, the same ruin has fallen on the peach trees. Pears and apples, as yet, appear to have escaped; but we can not determine absolutely until June.

The Peony Moutan, in my garden, is killed to the ground, although protected by mats, thrown over the tops, and these covered with several inches of snow. The roots being protected by the snow, will probably throw up new stems in the spring. I had four plants of this splendid flower, eight or ten years old. A temperature at, and a few degrees below zero injures the flower buds, if unprotected by straw or mats; by a little care of this kind I have generally grown fine blossoms.

Monthly Roses, especially the Provins, and Duke of York, which stand unprotected in common winters are killed to the ground.—The more tender kinds were protected by a covering of spent tan, and I suppose are safe. Of five varieties of the Magnolia, only one, the Grandiflora, seems to have suffered much. The Purpurea, Conspicua, Glauca, and Tripetala, are apparently uninjured. Some of Mr. Fortune's new plants from the north of China, seem to have borne this extreme cold with cool indifference—as much as to say they had been used to it—especially the *Weigelia rosea*, and *Spiraea prunifolia*. *Forsythia viridissima*, or the Golden Bell, looks rather drooping, as though badly frost-bitten, especially the flowering buds. All the foreign Raspberries are killed to the ground, where exposed to the weather; while the native

Ohio Purple, and the native New England Red, are so badly frosted as to spoil the present crop.

S. P. H.

Marietta, Feb. 10, 1852.

Application of Principles.

Jefferson county, Ky., Jan. 22d, 1852.

Dr. JNO. A. WARDER :

Dear Sir—When in the fall of 1850, at the meeting of the State Fair and Pomological Congress, I had the pleasure of meeting you and seeing the first No. of the Western Review, I was pleased that a work so necessary had been commenced among us; and while I could not free my mind from misgivings as to its success, I resolved to do what I could to sustain it, and encourage its editor. And now, after having read with pleasure and profit, all the Nos. of Vol. i, and up to No. 3, of Vol. ii, I confess, with self-reproach, that further than recommending it to my friends, and thus securing you a few subscribers, I have done nothing to aid and comfort you, or sustain your Review. It is well for you and the public, that others have been less remiss.—And now for the future, can I promise more? Without experience as a horticulturist or as a writer, can I expect to aid you, further than with encouraging words? Not yet two years have elapsed since I became a deserter from the crowded ranks of mercantile life—what have I to offer that could in any way interest your readers, unless I recount, for their amusement, the many ridiculous errors into which I, as a theorist, fell, when I tried practical, *bona fide*, “sure ‘nuff” gardening—they might afford amusement, but not profit, and not being flattering to self-pride, I decline it.

I was much interested in your article on hedges—that alone is worth a year’s subscription to the Review. I had set out one of a few hundred yards of Osage Orange,

the spring before your article appeared.—I had set the roots in a single row, one foot apart; they are doing well—and by following your directions in trimming, I have no doubt, in two more seasons, I shall have a perfect hedge. Last spring I set out more, sixteen inches apart, on the bank of a ditch. Owing to the dry season, they have made but little growth. I shall cut all back severely until sufficiently close and spreading at the base—being well assured that a defect here admits of no future remedy. I am surprised that some writers express doubts as to the utility of the Osage Orange as a hedge-plant, on account of its disposition to throw out lateral roots, to the injury of the field crop, and throwing up sprouts when torn by the plow. From my observation, I should think, if its roots annoyed any one, it must be our antipodes the Chinese, who live about under us. I have frequently pulled up two-year-old plants, whose tap-root was larger and longer than the top—and on examination, found that even then much of the root had been left in the ground. Indeed I have never been able to dig up the entire root of a single plant, so deep do they penetrate.

I hesitate to refer to the frost, on the morning of the 2nd of May last, lest I “har-row up your soul” with vain regrets. To me, indeed, it was a “severe frost”—as I was looking forward to the first fruiting of a great variety of Pears, Cherries, Plums, (*curculio* will occur to you as you read this,) Peaches, Apples, etc. My young trees were well covered with the promise of ripe abundance, which was to have been seen and tasted for the first time. On that morning the soul-sickening decree went forth—“wait another year.” All philosophers are not fruit culturists—but surely all fruit culturists should be philosophers. By the way, what other fruit offers half the interest that

the Plum does, to Western cultivators, with the certain knowledge that until further discoveries are made, they have not one chance in an hundred of eating the fruit of their labors? He will "deserve well of his country," who discovers an antidote against the Curculio.

I see that Tan bark is now the great thing to be sought for, by all who would be successful cultivators. Like all new things, I fear it is overrated by its advocates. How unfortunate those of us are who live out of the vicinity of a tanyard! Must we despair of raising Strawberries, because a learned philosopher tells us that *tannic acid* is a specific food for that plant, luckily for us, however, without sustaining evidence? I shall continue to use, as a substitute for Tanbark, as a mulch—rotton wood, mixed with leaf mold, as we find it in the woods; at least until convinced that *tannic acid* is assimilated by *any* growing plant. At present I confess myself skeptical. Very respectfully, P.

REMARKS.—Tannin abounds in the Strawberry—hence, on a hasty adoption of the "chemical theory," some cultivators have concluded that it is necessary to present this substance directly to the plant. The correspondent shrewdly asks, whether it has ever been known to be *assimilated*? His philosophy allows the plants some power of combining for themselves the elements to form the proximate principles of their economy; and here, perhaps, a single word may be necessary, by way of explanation: The organs of plants can not create *elements* or simple bodies; but they may combine elements to form what we call *proximate principles*, in the language of organic chemistry. But it is doubted by most authors whether these compounds are taken up directly into the circulation of plants, or merely as separate elements.—ED.

The Cane.

Miegia of PERSOON.

Arundinaria of MICHAUX.

DR. WARDER,

IN the autumn of 1837, a kind friend at Beaverdam, on James' river, sent me a large root of the Cane plant, and it was planted in a sunk border, about five or six inches below the general surface. There it has continued ever since to grow and increase, some stems attaining the height of eight or ten feet, and the roots spreading through a circle of nearly six feet in diameter. Latterly it has extended into the sod, and continues to send up new shoots during the whole growing season, so that some are scarcely a foot high when cold weather overtakes them.

Many years ago, a gentleman of South Carolina, presented a friend of mine in this neighborhood, with a fine root of the Cane plant, under the impression that it would serve as a valuable winter food for cattle. Through some inattention, however, it did not succeed; but if it had, it is not suited to that purpose in this climate, for the first severe cold destroys the vitality of both stalk and leaf.

I was much interested by R. M. Scott's account of the Cane Brake in the last number of the Western Horticultural Review. In this northern land, however, I presume that our warm seasons are too short for it ever to blossom, yet I apprehend it is not a tropical plant. When I was at Vincennes in 1816, I learned from some of the most intelligent gentlemen of that place, that it once overspread a large part of Kentucky; and that then it was growing abundantly on the alluvions of the Wabash—indeed, that it extended from the mouth of that river almost to Vincennes. My route, however, lay in an opposite direction, and I never met with it throughout the journey.

On turning to Pursh's Flora, I find a notice of its growing on the Mississippi in extensive and almost impenetrable tracts; and Nuttall, in his North American Genera, confirms this statement. From Elliott's Sketches, I infer that it is not rare in South Carolina and Georgia.

Nuttall mentions two varieties—one from three to fifteen feet high; and the other from thirty to forty feet high. The latter sort is "supposed to flower but once in twenty or twenty-five years"—the shorter stemmed, much oftener. DAVID THOMAS.

Cayuga County, N. Y.

ANEMONES.

The Grove, Feb. 4th, 1852.

DR. WARDER:

My Dear Friend:—After the publication of David Thomas' article on ANEMONES, I wrote him of my poor success in their cultivation; and in reply, with his usual untiring kindness, he has copied the enclosed articles for my benefit—but as I deem them worthy of re-publication, I send them to the Review.

I also enclose a "postscript" to my old friend's last letter to me, in answer to remarks of mine, on the weather, and the different markings of instruments in the same neighborhood. His lists of reasons are worth remembering, and I think worth publishing for that purpose.

Respectfully,
JOHN A. KENNICOTT.

From the American Farmer, vol. 14, page 277.

Greatfield, Cayuga Co., N. Y.,
10 mo. 28, 1832.

A FLORIST of this neighborhood purchased some Anemones at Thorburn's, about a year ago, and made me a present of three roots, presuming they were one or more of the numerous varieties of *Anemone coronaria*. At the usual time of planting, these were forgotten; but finding them accidentally in the early part of summer, I set them in a shaded border, consisting of pit-sand and vegetable earth from the woods, and thought

little about them for several months, except to keep the ground free from weeds. One month ago they began to flower with a splendor that has attracted the attention of every person who has visited the garden. The prevailing color is a light red, inclining to scarlet; the exterior sepals green, striped with red and white; but the bases of the interior sepals are white, with a stripe of this color often passing upward into the red. The flowers are double, sometimes proliferous, and often contracted on one side.

I had observed some time ago that the leaves greatly resembled those of *Anemone hortensis*; but in the culture of the latter plant, I have not been successful in the open ground; and it was therefore with some surprise that I observed the flourishing condition of our present plants. On examining them by Loudon's Encyclopædia of Plants, we found them to agree with *Anemone pavonina*, a native of France, and which is distinguished from *Anemone hortensis* chiefly by its "very acute sepals" and taller scape. Ours are from twelve to fourteen inches in height, the flowers two inches in diameter. Though so late in the season, these plants show no symptoms of decline; new scapes are successively protruding from the crown; and there is a fair prospect of their continuing in this state till the ground shall be frozen.

D. T.

From the American Farmer, vol. 15, page 29.

In the last volume, I gave some account of *Anemone pavonina*. It continued to flower till the severe frosts marred its beauty; and then fearing that the roots might become frozen and perish, I placed thin inverted sods on each side of it, and brought their edges close together, so that the upper parts of the scapes and the longest leaves only, were uncovered. Over these I threw a light covering of evergreens, and left it to its fate. Since the middle of winter, it has been well protected by the snow; but a general thaw having occurred within the last week, yesterday, on lifting the evergreens, I found the *Anemone* had been vegetating during its seclusion; and several new scapes had grown five or six inches long, though bent and crooked in consequence of their confinement. Should the weather continue mild a few days longer, it will be in full bloom.

I should have been afraid to trust this fine

plant in the open ground during the winter, if I had not had two others in the house for safe keeping. On the approach of severe weather these were *potted*, and taken into a common sitting room. Every necessary attention was paid to them in watering, etc., but the air proved to be too dry, and the flowers as well as the foliage began almost immediately to decline. D. T.

First Month, 24th, 1852.

Notings of the Cold.

THIS morning before sun-rise, the mercury stands 15° above. The greatest cold here, within the last fortnight, was 4° below. A friend from Otsego county informed me that his was 34° below about Christmas. He resides in a deep valley, and in that region they find it much colder in the valleys than on the hills—one reason, perhaps, why the peach tree on them do better than in the valleys—but there is doubtless another reason. The cold is more regular above, and consequently the buds are not started.

I have said that several things may conspire to show the cold less than it is. One man hangs his thermometer under a stoop or portico; another against a wall which is warmer than the air that surrounds it; a third places it only a few feet from the reflected heat of a building, or close fence; a fourth allows the snow to gather inside of the case, (only three days ago, after clearing it out, I found the mercury sink 4° in half an hour), a fifth puts his thermometer in a wooden box attached to a post, open, it is true, both above and below, but prevented from radiating side-ways; a sixth places it aloft, where, in clear, calm weather, it is often 6 or 8° warmer than it is at the ground.

J. J. Thomas wrote to me that his peach buds are killed by intense cold, (12° below,) but mine are generally unscathed, though I have found some with a brown speck in the heart. We are within a mile and a half of the Lake, which has been open throughout our severest cold so far. D. T.

Meteorological Criticism.

DOCT. WARDER;—In your February number (248 page) of the "Horticultural Review," there appears to be several mistakes in the degree of cold observed at different places; thus Franconia (so noted for its extreme frigidity, and being subject to frost every

month in the year) you have recorded at -25° below 0, while you put Zanesville, O., at -27° , and Lancaster, O., at -32° , these are probably, all typographical errors; the former is certainly so, as the paper in which I saw it noticed, placed it at -43° , which is nothing unusual in that locality.

Cincinnati is recorded, on the cold days, at -9° , -20° , -21° ; now, these appear to be all wrong, according to the observations of Doct. Ray, Mr. Winter and myself; we are upwards of a mile apart; the Doctor living in the N. E. side of the city, Mr. Winter in the N. W. side, and myself towards the Southern side:—the minimums of each on the 19th and 20th Jan.—the cold days—were as follows—

19th	10° below 0	}	Doct. Ray.
20th	12° " 0		
19th	10° " 0	}	W. Winter.
20th	13° " 0		
19th	10° " 0	}	J. Lea.
20th	10° " 0		

My thermometer indicated no greater degree of cold on the 20th than on the 19th; and the mean of the coldest day (19th) by it, was $6\frac{1}{4}^{\circ}$ below 0, that of Doct. Ray was 7° below.

As showing unusual degrees of cold at the places designated, the temp. at Quebec, which is only 21° below 0, must be especially erroneous, for, I believe, there is seldom, perhaps never, a winter experienced there in which a greater degree of cold is not indicated than that. JOHN LEA.

REMARKS—I am indebted to Mr. Lea for his exposition of this very interesting matter. Some errors typographical may have occurred, but it should be recollected by the reader that temperature is influenced by local causes, even in a "spell of weather" like this, which appears to have been so general over our extended country. Besides, there are already recorded facts which show that depressions of temperature, like other storms and meteorological phenomena, occur successively or progressively at different places, generally passing from the westward to the eastward. This was long ago pointed out in regard to the "Easterly Storms" of the Atlantic Coast, by Dr. Franklin, as a singular and paradoxical fact; and I have observed in the correspondence of my friends, that in Philadelphia the severely cold weather of December last, was subsequent to Christmas, which was a mild, foggy, and rainy day here, following our extreme cold on the 16th and 17th.

A reliable correspondent, writing from Aurora, N. Y., on January 24, says, "the greatest cold here within the last fortnight, was -40° ." So that we must not attribute all the discrepancies to faulty instruments, nor to typographical blunders.

Especial attention is directed to the allusions made by Dr. Hildreth, of Marietta, O., and to those of D. Thomas, of Aurora, N. Y., men whose conclusions

are entitled to great respect, from the accuracy of their observations.

The report in last number respecting Cincinnati, was taken from the current news; it is confirmed in this issue by the recorded result of Jno. Sayers here, and compared with the hourly recorded observations of J. L. Cox, of Zanesville. O.

ERRATUM.—By an unfortunate oversight, the printer has made Mr. Bennet say, on page 272, that Herefordshire cider is “dissolved,” when it should have been “also sold” for foreign wine.

METEOROLOGICAL TABLE.

CINCINNATI, JANUARY, 1852.

THERMOM'ER			WEATHER.			RAIN.	SNOW.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.		
1	35	36	cloudy	cloudy	cloudy		
2	34	36	do	do	snow		.65
3	32	33	do	do	cloudy		
4	29	39	clear	clear	var		
5	36	37	rain	snow	cloudy	.45	.20
6	31	36	snow	cloudy	do		3.00
7	26	28	cloudy	do	do		2.20
8	25	31	do	snow	snow		
9	32	33	do	cloudy	cloudy		2.25
10	29	32	snow	snow	snow		
11	24	28	cloudy	cloudy	cloudy		
12	7	12	clear	clear	clear		
13	6	16	var	do	do		
14	18	29	clear	do	do		.15
15	28	34	do	cloudy	cloudy		
16	32	38	cloudy	clear	var		
17	28	31	do	do	cloudy		3.75
18	16	19	snow	snow	snow		
19	—10	—3	clear	clear	clear		
20	—10	12	do	do	cloudy		.65
21	13	21	snow	var	snow		
22	6	16	clear	clear	clear		
23	14	31	do	do	do		
24	11	44	do	do	do		
25	18	47	do	do	cl'y. driz.	.05	
26	34	39	do	do	clear		
27	20	38	do	do	do		
28	30	51	var	do	do		
29	37	58	fog, clear	do	do		
30	41	55	var	cloudy	do		
31	51	60	rain	var	var	.25	

Total.....Inches, .75 12.85

Rain and snow water in the month, ..Inches, 1.65

Mean temperature of the month.....28.06°

Do	do	Jan.	1851.....	36.38
Do	do	do	1850.....	37.07
Do	do	do	1849.....	32.73
Do	do	do	1848.....	39.03
Do	do	do	1847.....	31.64
Do	do	do	1846.....	39.15
Do	do	do	1845.....	43.10

Coldest day in the month, the 19th.

Mean of the coldest day, 6¼ deg. below 0. which is believed to be the coldest day on record in this vicinity.

The quantity of rain and snow water which has fallen this month is much below the usual average.

Clear days in the month.....9

Variable, sun at times.....11

Cloudy, sun not visible.....11-31

WINDS—REMARKS.

- 1 Calm, light N.
- 2 Light, S E
- 3 Light N., calm at night.
- 4 Calm, light S E.
- 5 Light E.
- 6 do N W. brisk W.
- 7 Light W.
- 8 do S E., calm at eve.
- 9 do S W. and W at eve.
- 10 do N W. and var at eve.
- 11 do N W., brisk W.
- 12 do W., Navigation suspended.
- 13 do W and brisk S W.
- 14 do S W.
- 15 do S W and W. Snow at night.
- 16 do S W, brisk W. A few boats moved.
- 17 do N E.
- 18 do N and brisk N W.. high at night.
- 19 do N W and W.
- 20 do S. River fast frozen.
- 21 do S., S W, and W, calm at night.
- 22 Calm, light S W.
- 23 Calm, light S E and S, calm at eve.
- 24 Calm, light S.
- 25 Light S and S W.
- 26 Light N W.. calm.
- 27 Calm, Light S E and S., calm.
- 28 Light S., high S., light S
- 29 Calm, calm light S., calm.
- 30 Calm, calm light S. Ice passing away.
- 31 Light S E and S W., brisk S W and W.

JOHN LEE.

THAT COLD DAY.

Monday and Tuesday, the 19th and 20th of January, have furnished a topic for much remark throughout the country—nor have we yet heard the last, either of the degree of cold nor of the sad effects produced thereby. In the note which was hastily compiled and inserted on the last page of the previous number, the diverse readings of different instruments, even in the same town, have given rise to a suspicion that some errors have been committed either owing to defective instruments or careless observation. From Mr. J. L. Cox, of Zanesville, O., confirmed by other observers, I have the following first column, and from Jno. Sayers, of Vernon Village, near Cincinnati, the second column.—Ed. Review.

Monday, Jan. 19.			Tuesday, Jan. 20.		
4 P.M.		0°	1 A.M.	—17	0°
5 "		—3	2 "	—18	—22
6 "	—9°	—10	3 "	—20	
7 "	—10	—12	4 "	—25	
8 "	—11		5 "	—27	—20
9 "	—13	—14	6 "	—25½	
10 "	—14		7 "	—23½	—16
11 "	—15	—16	8 "	—16	
12 M.N.	—18		9 "	—10	
			10 "	—6	

Many other similar records could have been found, corroborative of the previously published accounts of that cold day, long to be remembered, if there were room to insert them.

Univ. of
California





Vol. II.

APRIL, 1852.

No. 7.

Rural Affairs.

THE AGRICULTURAL BUREAU.

This subject has already been introduced to the readers of the *Review*, at different periods; and, for some time past, it has been the intention of the Editor again to present it to them as a measure of great interest to all departments of the rural interests of our country—not farmers alone, and planters, but every citizen who cultivates a foot of the soil, and beside them, every manufacturer and consumer of the products of the earth is deeply interested in the establishment of an extended agricultural department of our government.

The Americans have been styled an agricultural nation. Certainly, a large portion of the earth is here devoted to the production of varied crops, many of which are consumed or manufactured within our own borders. The products of our soil are of vast importance, and this interest should demand a corresponding attention from those who serve us as our rulers. Read what the President says; he tells us that

"Agriculture is unquestionably the great interest of our country, whether we have reference to the number of persons employed

in it, or to the value of their productions.— It appears from the census of 1840, that the whole number of persons at that time engaged in this pursuit, was 3,719,951; in manufactures, 791,749; and in commerce, 117,607. More than four-fifths of the entire population were therefore employed, in the cultivation of the soil.

"At present it is believed that the proportion is still greater, in consequence of the change in the policy of the government, which has induced many to become agriculturists who were formerly engaged in manufactures. And yet we find that; whilst a large portion of the sessions of every Congress is devoted to the protection and encouragement of manufactures and commerce, nothing has been done for agriculture.— Within a few years after the adoption of the constitution, President Washington recommended to Congress the establishment of a Bureau of Agriculture, but nothing was done to carry his recommendation into effect.

"The subject has since been brought to the attention of Congress from time to

time, by Executive communications, reports of the heads of departments, and petitions from the people, but without success.

"As the results of the late census have furnished official evidence of the importance of this interest, and as we are now at peace with all the world, and fortunately relieved from those distressing and embarrassing topics which have so long disturbed the harmony of our legislative assemblies, and withdrawn their attention from the true interests of the country, it seems that no time could be more auspicious than the present to secure for the great subject a candid and enlightened consideration."

The recommendations of Mr. Fillmore and his predecessors have not been entirely thrown to the winds. They perceived the importance of this measure; and while directing the attention of Congress to various other topics connected with the best interests of the nation, they also urged them to care for the wants of the toiling cultivators of the earth; and it is cheering to find that such men as Governor Doty, of Wisconsin, and Senator Soulé, of Louisiana, have earnestly stepped forward in either house, with a bill for the purpose of establishing a cabinet for the collection of facts, and the diffusion of information, as well as for the serious and scientific investigation of all matters connected with this great interest of our country.

The move is made—the work progresses. May the honorable movers be so ably supported by the plaudits of the people in whose behalf they act, that they will never regret their prominence in the completion of the measure, which it is sincerely trusted is now at hand. But since this is not a matter to be influenced or urged by party, or by the hope of gain, let the people give their encouraging voice of *well done, go on*, to cheer the champions of their interests.

It is delightful to find the press speaking out freely in commendation of the measure, as it is now doing in every quarter. When alluding to the bill now before Congress, the *Ohio Farmer* judiciously says:

If the information we have received be true, the representatives of Ohio in both houses will give their strong aid and support in the perfecting and passing of this bill, destined by its passage and fulfillment to add largely to the increase of the great interests of our people—interests, an item of which may be counted from Ohio in the production of over 30,000,000 bushels of wheat, and over 50,000,000 bushels of corn in one year. And this item, by means of enlightened practice and improved seeds, every intelligent cultivator of the soil acknowledges could be easily doubled. Individuals may ever be found, such men as Wilder, Downing, Kennicott, and a host of others, ready to lend their single aid toward advancing improvements in the modes of culture and the dissemination of new and valuable seeds. The testimony of hundreds at the East, and of thousands in the great West, (the immense theater of the world for agricultural products,) may be seen written throughout all our papers, of what such individuals have single handed, and unaided by government, already done.—How much more then may we not reasonably expect when Congress shall have placed in the hands of men of like character, a department having the stamp of the nation upon it, supplied liberally with means and with a system perfected for prosecuting vigorously every course destined to meet the wants of our agricultural world.

Our sister States all around us are urging forward this Bureau establishment, so far as they can do, by resolutions and writings. All our agricultural papers have given more or less of their columns to articles in its favor, and we, were it our duty, or would the act go toward advancing the cause in reality, might produce columns of statistics to show conclusively that for the advancement of the best welfare of our whole country, it is absolutely requisite. There are, however, other and more capable men who are giving it attention, who are collecting information to bear down any opposition, if

opposition can be made, to the passage of some such bill as that introduced by Mr. Doty.

Here is the bill to establish an Agricultural Bureau in the Department of the Interior:

Be it enacted by the Senate and House of Representatives, of the United States of America in Congress assembled, That there shall be established and attached to the Department of the Interior, an Agricultural Bureau, the head of which shall be called the Commissioner of Agriculture, who shall be appointed by the President, by and with the advice and consent of the Senate, and shall receive the same salary as the Commissioner of Patents.

SEC. 2. And be it further enacted, That it shall be the duty of said Commissioner to collect agricultural statistics; to procure and distribute valuable seeds, cuttings, buds, and tubers; to procure and put in operation a chemical laboratory, at a cost not exceeding two thousand dollars, and cause to be made all desirable analyses of minerals and mineral waters, and such as relate to the composition and improvement of soils; the feeding of domestic animals; the preparation and preservation of provisions and breadstuffs; the manufacture of cotton, flax, hemp and sugar, and such other manufactures as may be connected with agriculture, and arise immediately out of agricultural products; and to prepare and make annually a full report to Congress, containing an account of such experiments as may have been made and such useful information as may have been obtained on all the subjects connected with the duties of his office.

SEC. 3. And be it further enacted, That there shall be appointed in said bureau a chemist, whose salary shall be two thousand dollars per annum; a clerk, whose salary shall be one thousand six hundred dollars; a recording clerk, whose salary shall be one thousand dollars; and one messenger whose salary shall be seven hundred and fifty dollars.

SEC. 4. And be it further enacted, That there is hereby appropriated, to pay the salary of the commissioner, chemist, chief clerk, clerk, and messenger; to purchase the seeds and chemical apparatus, and defray the contingent expenses of said Bureau

for the fiscal year ending the thirtieth of June, eighteen hundred and fifty-two, the sum of eight thousand dollars.

It has been justly observed that for the extended wants of this important subject and the immense number of the persons interested in the success of the measure, the provisions are likely to prove inadequate, let us not, however, reject the little that is offered, trusting that with that little, it may soon be demonstrated that more is required and will be worthily spent in so good a cause. A correspondent makes the following suggestions as to the probable wants of the Bureau:

PLAN FOR AGRICULTURAL BUREAU.

Commissioner appointed by President, salary,	\$3,000
Three assistants, for Field culture, Stock Husbandry & Horticulture, appointed by the Commissioner, salary \$2,500 each,	7,500
Chemist and Geologist,	2,500
Assistant Chemist and Geologist,	1,500
Chief Clerk,	1,800
Book Keeper,	1,000
Messenger,	700
Total salaries,	\$18,000
For Library and Chemical Apparatus, etc.,	10,000
First year's contingent expenses,	10,000
	\$38,000

This is the lowest possible estimate for a respectable and an *efficient* Bureau, if the government does the *printing*. But with \$50,000 more, (\$88,000) the department could do its own printing much better, and distribute the books more usefully.

There now is something *liberal*, but not more than is wanted and should be demanded by the agriculturalists of the country. We of the west are really most interested in this matter. Our broad plains are the granary of the nations—our varied climate and our fertile soil make us a great agricultural people. Our interests are paramount.

and should be attended to. Let us then be "up and doing." Let the farmers speak out—their voices will be heard and can scarcely be disregarded. Moreover, the direction of this Bureau should be in the hands of an industrious, *working* man, one of enlarged views and possessed of extended observations. Such men I know are

not common, but such a man may be found, and I trust, for the honor of the great West and her widely extended agricultural interests, such a man will be found within her borders, whenever the President is able to make the appointment under the law about to be passed, and which I sincerely trust will very soon be passed.

MRS. GRIMSHAW'S GARDEN.

THERE stood, a few years since, on a certain road leading from the village of Morton, a cottage, or, more properly speaking, a small house of a most lugubrious appearance. There was nothing promising about it—at least not in my eyes—for it was a straight, narrow house, with a slated roof, common chimneys, and windows of every variety of size and shape, and no two alike. There was no climbing plants nor bright flowers about it; and the piece of ground in front, though of tolerable size, (being about sixty feet by forty-four,) was surrounded on two sides by lofty walls, on the third by a dull cottage, and on the fourth by the turnpike road, separated from it by a low wall with a crazy gate. Right in front of one end of the house stood an old stone barn, occupying a considerable part of this piece of ground, and obscuring some of its windows, as it reared itself at not more than six feet from them; and when I add that the aspect was north-east, I think it will be apparent that there was but little of the attractive character about the place.

It was, therefore, with no small surprise, that I heard of an invalid lady having fallen in love with this "*Castle Dolorous*," and purchased it after one hasty inspection; and it will be credited that the curiosity of our little country neighborhood was soon at high tide to make out what she was going to do with it. It was understood that the interior state of the house was neither brighter nor better than its exterior; and it was soon decided on all hands, that whatever else the poor invalid might do, she would soon repent of her bargain.

But Mrs. Grimshaw, it seems, thought otherwise; she showed no symptoms either of repentance or disgust; on the contrary,

she appeared to exult in the idea of her future home, and might be seen daily, even before she could obtain possession, standing in pleased contemplation of the new domain.

The very day she received the key of her door, she set to work. The barn had been already removed, for it seems she had made that a stipulation in her contract; and now, masons and carpenters, painters, and paperers, were speedily set in; and as soon as a sitting and bed-room for the lady, and a bedroom and kitchen for her maid could be arranged, Mrs. Grimshaw made her entry, utterly regardless of the state of every thing around her.

The garden was now one pool of mud, diversified by a few wells of mortar, heaps of stones, and other building materials, and the house door could only be reached by stepping from plank to plank, and from stone to stone. Over these mud heaps, however, the invalid lady contrived to climb, and ensconced herself among her works; and soon the wonderfully changed appearance of those rooms which had undergone renewal, gave tokens of the improvements, which, in the course of time, might be expected without; and though all was done in a simple and inexpensive style, and the furnishing and filling up were somewhat old fashioned, there was an air of comfort and of home diffused through the whole, which led to the idea that Mrs. Grimshaw had an eye for detecting capabilities, and a mind that would not be daunted by petty difficulties.

But Mrs. Grimshaw's garden is the subject we have to discuss, and not the house. Of the future state of this, she seemed to have some very pleasing provisions. She appeared to have it all before her mind's eye,

redolent of perfumes, glowing with flowers, a place where she might walk, and sit, and meditate, and from which the greatest enjoyment and credit would accrue to her.— But when I left Morton in November, such as I have described was the dismal state of this rather swamp than garden; and I confess I somewhat pitied the poor visionary, and doubted how far her hobby would carry her before it left her floundering in the mire, amid which her imagination was at work. I was several months from home, and some weeks elapsed after my return, before my steps were turned in the direction of Mrs. Grimshaw's garden. But at last I thought of the shabby cottage, and its adventurous tenant, on one evening in July, and I set out, resolved to have a peep at what was going on. It was, however, some little time before I could fairly discover what I was in search of; not because the cottage did not stand where it stood when I last saw it, but because all about and around was so changed in aspect, that when I stood in front of it, I really could scarcely persuade myself that it was the same spot. Never was there such an alteration. A light iron railing, raised on a wall about three feet in height, from which sloped inward a bank of emerald turf, separated the road on which I stood from a perfect mass of verdure and brilliancy. In one part, and placed so as to shroud the entrance gate, was a mound of rock work, crowned with flowering shrubs, and enamelled with low growing ferns, stonecrops, hypericum, and other plants of bright hues, whilst a single small tree of elegant growth rose from the side of the gravel walk which passed down one side of the little domain, just so as to break the line of the house, and cast a light shadow on some of the exquisitely tinted flowers, that, glimmering on the evening sunlight, filled the nicely cut flower buds intersecting the smooth, green turf. A light tracery of brilliant-colored, climbing plants, clothed the lower part of the house, and a pretty porch had been added; the walls were partially clothed with similar bright raiment; and, to crown all, there stood the same form which I had so often beheld contemplating the mud pools, now apparently wrapped in admiration of the result of her labors. And here was another wonder—Mrs. Grimshaw was as much altered as her garden! instead

of the pale, broken down invalid, whom I used to fear would never live to see the fulfillment of any of her plans, I beheld a bright, comparatively healthy looking dame, who, for every rose she had planted in her garden, seemed to have planted two on her cheeks. I really was so struck with admiration and astonishment that I quite forgot myself, and stood gazing until, rather to my shame, I met the eyes of the owner fully turned toward me; and as it was evident that she had forgotten me, I found myself obliged to speak and apologize for my rudeness. A cordial invitation to come within the works was speedily given and accepted.

“But how, my dear Madam, did all this change take place?” said I. “You must have surely purloined Aladin's lamp, for nothing less wonderful is this than was his magic palace.”

“Well, my dear,” replied Mrs. Grimshaw, laughing, “my cot is certainly improved; and I think I have succeeded pretty well in convincing the croakers who so much lamented over me and my prospects, and who thought I showed more conceit than wisdom when I predicted that my house would be habitable, and my garden pretty. But, O dear! it is nothing to what I mean it shall be in a year or two, if it please God I live, and go on with my plans!”

And here the good lady began to call my notice to this shrub and that creeper, which was hereafter to make such and such shoots, and fill such and such spaces; but as it was with the past my mind was busy, and I really wished to know how my friend had set to work, and what means she had used to effect the change so rapidly, I begged her to enlighten me on these points, telling her that “I also had a dismal cottage, and should like to transform it into a paradise, if she would tell me the way;” and as there may be others who would like at the same time, to better their property and their health, to plant roses round their habitation and in their cheeks, I can not do better than give good Mrs. Grimshaw's account of matters, as she gave them to me.

“You must know then that, like Abraham Cowley, I never had any other desire so strong, and so like to covetousness, as that one which I have always had—that I might be master, at last, of a small house and large:

garden, with very moderate conveniences joined to them, and then dedicate the remainder of my life only to the culture of them, and the study of nature," (I must modify the expression a little, and say, instead of "a large garden," "a small garden;" and add, "and of the God of nature,") "and then you have the amount of my aspirations. I was put aside from attaining any part of this for many years; but, as I had often boasted how pretty my garden should be, when I had one, I could not be content to fall short of my boasting; and when it pleased God to put opportunity in my way, I felt myself stirred up, as much perhaps by the desire to be as good as my word, as by that of having a really enjoyable garden. I have also a sort of natural love of overcoming difficulties, so that those which now stood in my way, rather stimulated than discouraged me. But how to set to work. I had never yet made a garden, and knew little about it; the situation, so near the road, and so much in the shade, was not quite what I could have wished. There was neither grass nor flowers, neither gravel-walk nor parterre, neither mold nor manure. I had no servant but one maid and a little girl, very little strength, and but £5 to lay out; for, on summing up my finances and my responsibilities, I found that this sum was the utmost I could, with propriety, bestow on a mere luxury. However, "Faint heart never won fair lady." I must have my garden—I must make good my boast; and so I set about it with a good heart. You know our friend Cowper says:

"He, therefore, who would see his flowers disposed
Sightly and in just order, ere he gives
The beds the trusted treasure of their seeds,
Forecasts the future whole; that when the scene
Shall break into its preconceived display,
Each for itself, and all as with one voice
Conspiring may attest his bright design."

"Hours after hours, therefore, with this design in view, I stood at my windows, planning; the naked walls frightful high, became as I gazed, clothed with draperies of climbing plants of every hue, the mud heaps turned into prettily shaped flower beds, and the waste of liquid mud which surrounded them into verdant turf; a fine, firm gravel-walk rose into existence, and a visionary tree, just of sufficient size to allow my sitting under its shadow, loomed into sight; whilst here and there little hillocks of turf crowned

with flowering shrubs, broke the monotony of the flat; in fact, I saw things more as they are now than as they really were at the time; and after sundry musings, I took pen and ink and marked out a sort of ground plan of my future garden, from which I have scarcely deviated. I then set warily to work. My first step was to get my walk made, not gravelled—that I left for a finishing stroke; but a path to my house must be secured at once. This, then, was marked out. One laborer—for I could not afford gardeners—was set to break up the ground, whilst another leveled the space designed for the turf and flower beds, a child being employed to clear away the stones and sticks which were turned up by the diggers; and here came in a stroke of good luck. On picking up the ground, the man came to a layer of a sort of marl, which was pronounced to be the very thing for walk making; this, therefore, was collected and laid on the sub-stratum of faggot wood which had been placed; and in a day or two I saw a good, firm, five foot wide path, well rounded off at the sides, so as that no water could be allowed to settle on it, connecting both the doors of my house with the outer world. This being done, and the ground being leveled, my maid and I pegged out the flower beds; and the *deads*, as they call the hard, waste earth which was dug out from them, and from the foundations of my bit of building, were thrown up in certain places where I had an eye to a bank or mound, and this at the same time saved me the expense of carting away the rubbish, and secured to me the little undulations I had planned.

"This done, and the stones being gathered to one place for other purposes, I set about the most expensive part of my operation, namely, turfing. I had to get turf for this from the hill side, and to pay so much a load for it, besides the expense of cutting and carrying; and I really began to think that my £5 would never hold out; however, by sparing both men to cut and prepare the turf, and at the same time to select a few rough stones for my bit of rock work on which I had set my mind, and then, when all was ready, having a cart and horse for the day, I contrived to get the matter accomplished. I could, of course, have sown grass seed, and this would have been less

expensive at first ; but by the time I had it properly weeded and rolled, and cut sufficiently often to make it fine, it would have cost but little less than bringing the turf from the hill, and not have been in order nearly so soon ; therefore, as the turf was to be had not very far off, I indulged myself in this one matter, in taking the more expensive course, and I have not regretted it.

Then I saved a great deal of both time and money by knowing my own mind, and having all my plans cut and dried, and ready for use before I set to work. You should have seen how the men stared at the decision and rapidity with which all went on ! There was no shilly-shallying ; but one thing succeeded another with such promptness and regularity, which could not have been, but for my long window gazings, and my many calculations. I dare say I made a dozen mistakes, but there was no one to find them out ; and I succeeded finely in the whole ; and my £5 paid for all, and left me a few shillings to buy plants for my garden.

Then there were some evergreens which were in the ground when I bought it, more than I needed : so I got the nursery man to change them for about fifteen shillings worth of shrubs and climbers for my wall ; and by the middle of November my mounds, flower beds, and rockery were all complete, and the turf and gravel laid. It all looked rather trampled and muddy, and the flower beds bare enough, notwithstanding several baskets of plants sent me by old friends at my former home, but it was all in order to grow, and I rested from my labors with pleased anticipations of the beauty that was to follow. I put some ranunculus roots in one bed and some nemophila in another, (that you know, if sown late in the year blows early in the spring), and I thought my work was done, but alas ! I had not been quite so clever as I had supposed. I had forgotten that when rain came it must necessarily *pond* in the lower part of my ground, and I had not provided any means to prevent this ; so to my dismay I saw when I arose one morning, that a regular flood had taken up its quarters in my garden and there were only the highest parts of the flower beds in sight, looking like little boats, floating about in the turbid waters. Now came in my heap of stones. I was obliged

to have the turf carefully raised, and to intersect my ground with a series of ditches about two and a half feet deep, these were half filled with stones loosely put in, so as to leave a passage for the water between, and then filled up with earth, and the turf laid over all ; these acted as land drains ; and proud I was to see that at last my turf was visible even in a stormy day.

“But my dear madam,” said I, “I can not even now make out how you have contrived that your parterres should look so gay, and those acres of wall be so speedily concealed.”

“Annuals, my dear—mere annuals,” replied my friend, “by winter they will be as bare as ever. I put in stores of canariensis sweet peas, nasturtiums, major convolvuluses, etc., and very prettily they look just as a temporary covering ; but I am not trusting wholly to them, there are other creepers of a more permanent character planted between—such as varieties of roses and clematis, a wistaria and a passion flower, and these will next year begin to make some appearance ; but it will be three or four years before I shall be able to make any show without my annuals. Of course the same management is in a degree necessary in my flower beds, as whilst my roses, fuchsias, and carnations are maturing, *mignonette*, *convolvulus*, and other bright annuals fill up nicely. The great difficulty is to provide that your garden shall not be brilliant in one month and dull all the rest of the year. This must be managed by a wise admixture of those plants which bloom at different seasons, so that when one goes off another one near it shall be just beginning its blossoms, and also by having some odd corner where you can store away a few plants which will bear removing so as to fill up the vacant spaces left by decayed annuals, etc. Now all this is easy enough where you have a regular gardener and a green house, or where you can afford to go to a salesman and purchase plants in blossom suited to the season as it comes ; but for those who have neither of these helps I can only recommend the plans I have suggested, and also to stick into the earth every bit they are obliged to cut off or that they break off by accident, from such plants as will grow by cuttings. It is quite a mistake to fancy that all cuttings require warmth and

shelter. It is not so, for most kinds of fuchsias, carnations, salvias, and even geraniums, will grow in the open ground, if put in early in the year, and as to penstemons, you may get a dozen plants to grow where one will fail."

"You have succeeded most wonderfully, dear madam," said I, "but there is one point on which you have not touched, and which moves my astonishment more than any other; that is, the extraordinary improvement in your own appearance."

"All traceable to the garden, my dear Miss Oliphant," was the reply. "First in superintending the making of my garden, and then in watching over my plants. I have of necessity been continually out of doors, and I believe nothing is more beneficial to health than a pleasant out-of-door employment, which interests the mind, without overstretching it. You know I can not bear much walking or standing, so I generally have a chair at hand, and sit while I direct my subordinates; and not unfrequently I sit on a low camp-stool whilst I trim a rose bush or pink root, or even sow a patch of seeds, or pull up some weeds. I and my maid, for I have indoctrinated her deeply in the art of gardening, are always at it, and are busy together every evening, training and trimming, and certainly the benefit to the health of both has been great. I am glad to hear that you too have a garden to make, for you look a poor delicate creature. Ah! my dear, take my word for it," continued the good lady, "neither the gay balls and opera, nor the intellectual conversazioni and soirées in which you have been so much of late, during your travels, are half so good for body and mind as the more simple pursuits of gardening, and other such country pleasures. I am satisfied that when you have once set well to work in making your garden, we shall soon see the carnation hue on your cheek once more."

And so we parted, for my visit had been over long. It is now, I think, the fourth year of good Mrs. Grimshaw's occupancy of the once dreary cottage, and a few days ago I spent an hour or two in the pretty garden which it has become one of my pleasures to watch. No material alterations have been made since its first formation, only some of the flower beds enlarged or altered a little in form, and one or two new

ones cut; but the growth of the shrubs and creepers has greatly altered its appearance, and the elegant neatness of all about it combines with the exquisite brilliance of coloring, and the rich odors arising from sweet-brier, clematis, heliotrope, carnations, and a thousand other fragrant blossoms to render Mrs. Grimshaw's garden, a perfect "paradise of dainty devices." I inquired how she managed to have her walls so closely and neatly covered, for I could perceive none of those ugly nails, and pieces of list and cloth, which generally so much deform the beauty of such arrangement.

"See here, my good friend," said she, putting aside some of the leaves which concealed it, and showing me a wire round which the stems and wires of several plants were intertwined, "look at this phalanx of wire. One of the first things I did was to provide means for my creepers to ascend without my having the endless expense and trouble of getting them nailed. I procured a quantity of large nails, and some common iron wire, and set one of my handy laboring friends to work. I made him drive one row of nails at the top, at about twelve inches apart, and another to correspond, at the bottom of each wall, and then strain a wire from each of those above to each of those below, which wire he afterwards painted dark green, to preserve it from rusting, as well as for neatness of appearance; this I had done on all the walls; and at a cost of less than ten shillings, including nails, wire, labor, and paint, I got what, had I gone to the ironmonger, and had the usual rods and wire, would have cost me about as many pounds; and as not one has as yet failed, I conclude the one plan is as good as the other. Now, you see, I have only to catch the end of any shoot which is getting wild, and tuck it behind the wire, and it soon takes hold, and fixes itself by means of some one or other of those wonderful provisions which God has made for the purpose of enabling plants that run high, to support themselves. Now do, my dear, just look at the beautiful hold-fast provided for this Virginia Creeper! You see it needs no wire, but by means of this sort of claw, it fixes itself on the bare wall, and draws itself up to any height. Ah! you may pull, but you will not loosen it," added she, seeing me try to get one of the articles under discussion to examine: "the

little red stem will break, but no force will loosen the beautiful sucker-like points from their hold. But there," continued my friend, "I must not begin on my favorite subject. If I ever do write any thing for the public, I really think it must be a treatise on *hold-fasts*. I mean the tendrils and twisting stems, and other such provisions for climbing plants."

"I am sure I for one shall feel great in-

terest in reading it, dear madam," said I; "but it grows late, and I must go," and so leaving the good lady so completely absorbed in contemplating her "claw," that she could scarcely say farewell, I departed, laden, however with such a gorgeous bunch of flowers, as few other little gardens could have furnished without having been divested of half their jewels.—*Chambers' Edinburgh Journal*.

ON THE THEORY OF PRUNING FRUIT TREES.

Continued.

BY L. YOUNG, SPRINGDALE, KY.

ACCORDING to the received doctrines in Botany, in the case of exogens, a wood or leaf bud in development, forms an axis or branch with its appropriate leaves, arranged in an order peculiar to each genus; each leaf, in its foot stalk, being furnished with an inner and an outer set of ducts and vessels, which vessels, in the course of a growing season descend by extension to the roots; the inner set upon the smooth, cylindrical surface of the alburnum; the outer, (if Lindley's notions of the proper office of cambium be true,) upon the inner surface of the bark; the annual deposit of wood and bark lying between these inner and outer ducts and vessels. In time, during the season's growth, anastomosis takes place in the axilla of every such leaf; a new wood bud is formed and installed upon the apex of the bundle of vessels, woody fiber and bark, which, originating in the foot stalk as before stated, has already descended by extension to the roots.

In this way, every wood bud is in a state of direct communication with the roots, ready by vitality and capillarity, to pump up supplies of food for the formation of still other leaves and branches—destined in their turn, still further to increase the vigor and size of the trunk and roots. A fruit bud is a metamorphosis of one of these wood buds; "it is a wood bud excited into growth; but which

in growing, elongates neither upward nor downward." It is obvious then, that being seated in connection with vessels extending to their roots, the fruit bud pumps for itself food from the general circulation, but not extending downwards in growth, it has no chance by which to send succor and strength to the stem and roots. The fruit bud is, therefore, a sort of parasitical plant, living at the expense of the wood system, and as it is generally expressed, in a state of "antagonism with it." To the practical cultivator, it is a matter of secondary interest whether this metamorphosis result from some innate power peculiar to the life of plants, as the learned Dr. LINDLEY supposes—or is brought about by some outward circean agent everywhere present, and ready to act, under proper conditions, as the luminous ray of the compound sunbeam, which is the theory of a certain French philosopher.

But the propositions themselves, being admitted to be true, there are certain hints which may be drawn from them as corollaries, and which will prove instructive in a high degree to the farmer, pomologist and gardener. Two of them I propose to consider briefly in the present article.

1st. That in exogens, which include most fruit trees, the normal place of the fruit bud is within the circuit of circulation, and that

generally, its appearance at the extremities of leading branches, is an evidence of over fruitfulness and disability, if not disease.

2d. That as from organization, the fruit spur system is supported out of the general circulation, upon the principle of parasites, and maintains what is termed "*the balance of power*," by absorbing just so much of the general circulation as prevents over luxuriant growth in the wood system—no more and no less; too great a diminution of the wood spurs has a tendency to overstimulate the wood growth.

If we attempt to look around for evidences of the injury which trees and plants sustain, where fruit buds are allowed to take possession of the extremities of the main wood branches, and to cover the whole outer surface, we can hardly go astray, whether in the orchard or garden, especially when the plantations have been of long standing. Do we see the bearing branches of the gooseberry or currant bristling with thick and pointed clusters of fruit buds to their very ends? If so, it may be set down as a truth, that such branches are destined to perish at a day not remote. If again, we examine the pear and the apple and find the whole exterior surface of the trees covered with fruit buds and fruit spurs, such a state of things is evidence of present debility, or a most pregnant sign of its speedy approach; indeed whole families of fruit trees (heavy bearers generally,) are sometimes seen to blight in this way—the wood system being stifled and supplanted by these parasitic spurs, and only re-appearing amid the dying throes of the tree, under the shape of "water sprouts," in the body and large branches of the tree, where they break out in clusters, not unlike those present in the peach tree when affected with "yellows."

If one were skeptical of the doctrine of Botanists, that fruit buds add nothing to the wood system, it would be quite easy to

remove such doubting by a little personal examination of trees upon which the fruit bud system is developed in great excess. Numberless examples might be found of branches not larger than rye straws, terminated by fruit buds, showing unerringly an age of three or more years, while such branches themselves show no increment of wood over and above the annual ring of the first season's growth; in fact, in such cases, the order of nature seems inverted, and instead of that taper growth from the trunk upward and outward, which marks and makes beautiful a tree in health, those fruit spurs go on enlarging and multiplying, until the thickening and bloated masses of debility darken and almost obstruct the view.

In illustration of the second part proposed, I shall draw largely upon individual experience, and hope that I may state, without being thought presumptuous, that my fruit crops, for some years, have presented a uniformity of appearance which has led some persons, and especially the less experienced, to suppose the result ascribable to the possession on my part, of some secret in the art of cultivation. I hardly need say that such is not the fact, and that I have never based a hope upon any other foundation than good culture, aided by a practice in pruning and training, conducted in accordance with the natural habit of each genus. But in efforts to acquire a knowledge of these natural habits, (which knowledge constitutes in part the science of pomology,) I have, after having endeavored to avail myself of all the light shed upon this subject by others, sometimes perpetrated egregious errors, and perhaps I never committed an error more egregious in character, or more expensive in its consequences, than one in relation to the nature of this very fruit bud system, or spermogamous force. I term this error expensive because, in adopting a practice of

pruning the peach and pear in conformity thereto, I lost a large part of the general crop in several bearing years, *for the want of bloom.*

Anterior to about the period 1847, I was, when growing fine fruits, in the habit of thinning the crop by removing a large portion of the fruit spurs with the fruit attached leaving only those bearing the specimens intended to be ripened, and with the peach particularly, by way of *monsterizing* individual fruits, I reduced the whole count to a very small number upon certain young trees, nor was this practice abandoned till I saw branches of bearing trees, thus treated, running up into a nursery growth, the "tout ensemble" of which branches resembled more a thicket of young trees than a well proportioned individual tree. Indeed I have been more than once mortified to see fruits treated thus, and from which so much was expected, come to a perfect stand still; the whole crop of certain individual trees, ultimately withering, growing yellow, and dropping without maturity, whilst the buds of the current season would swell and burst into active wood growth.

These fruit spurs being in the nature of parasites, possessing and enjoying supplies of food obtained at the expense of the wood system, exist in a state of antagonism therewith, and holding forcible possession of the power to feed upon the general circulation, they must exist in such numbers, collectively, as will enable them, as a system, to keep in check the wood growing force, the constant tendency of which is to a monopoly of the whole circulation, and to a growth of over luxuriance. Although it is a maxim generally received as a truth, that in sharing out any given stock of supplies, the fewer the distributees the greater the distributive share. The functions performed by the fruit buds collectively as a

system in this case, qualified the application of this maxim. When I thinned the crop by removing the spurs up to a given point, the operation might be salutary; further diminution disturbed the balance of power, and diminution carried to extremes stimulated the wood growth to a luxuriance which for a time suspended the development of fruit buds of a healthy character.

Although my remarks concerning the nature of these two forces have been confined to exogens, it by no means follows that a knowledge of them in other families of plants is either unattainable or useless. Such knowledge is not unattainable, since among cereals any experienced farmer will in early spring, long before the wheat plant has shot into culm, and as far off as the eye can discern colors, pronounce upon the promise of any wheatfield for a crop abounding more or less in straw or grain, as the dark green of luxuriance or the more subdued tints of moderate vigor happen to prevail; nor is it useless, since thereby a definite object is set before us and we have only to seek for means suitable to accomplish it—and it is somewhat remarkable as well as gratifying to the advocates of book-farming to notice the harmony in principle which prevails in the prescription of Loudon, the highest English Agricultural authority, for converting an over-luxuriant wheatfield into productiveness, and that of Monsieur CARPÈ, French Pomological authority quite as high, for changing an over-luxuriant wood branch into fruitfulness—the one would rob the plants of their blades in April by "*cutting them off with sheep or even horses:*" the other would "pinch early the soft extremities of the shoots on vigorous parts."

I have thought too that Mr. Downing's strawberry problem would admit of solution on this principle. Many varieties tending, in a rich soil, to that obesity of luxuriance

which is imbecility, are kept in moderate vigor by compelling the roots to labor for a living amid pounded soil, which is to them, being pastured on "short commons."

L. YOUNG.

Springdale, Ky., 1851.

REMARKS.—Thus ends the second part of this interesting paper, which, like its predecessor in number six, is also copied from the *Horticulturalist*, to which our Kentucky neighbor appears to prefer sending his valuable contributions to science, drawn from a long and philosophical series of observations. It is well, perhaps, that he, and all such students and teachers should not be clannish, such men belong to the world, and the world has a claim upon them *il n'importe*, the Editor of this Review, can also say "no pent up Utica," etc., and will ever claim what good he finds where'er it grows in the "wide, wide world."

Soils.

No single earth, nor even a composition of two earths, is fertile. The union of at least three—lime, silica, and alumina, is indispensable to fertility. For this the granite is decomposed, and the matter deposited by rivers in the bottom of valleys. And to this, every revolution and commingling of the strata of the ancient earth has been made subservient. But this subordination is continuous, extending into that of the vegetable kingdom itself. Chemical and mechanical action almost fails to convert some rocks (as quartz) into soil. Yet not the less are these rocks subservient to the vegetable life. Here, where no other plants would exist, the Creator has placed the multitudinous and inexplicable tribe of lichens, "the pioneers of vegetation." These prepare the way for the mosses; and these, again, for other plants superior still—each contributing in succession, when it has contributed by its life and death to place a better race on the spot, till at length the stately tree waves where once nothing but the apparently rootless, leafless, flowerless lichen could exist. And this law of subordination

is found to descend to the physiology of the individual plant. The organs of conservation are subservient to the organs of reproduction, the individual to the species.

Though unconscious of a purpose, no plant lives to itself. In some tribes, the constitution and cares of the parent plant appear to be concentrated on this point, as on the end of its existence. The tribes of annuals die as soon as this end is answered. Others, in a sense, refuse to die, till they have answered it.

The same subordination obtains among the individual organs. "God hath set the members every one of them in the body as it hath pleased him;" and though no organ is useless, their value is graduated; and hence, a leaf, having answered its end, may fall off without any injury to the plant.

But then this subordination of one order to another, of plant to plant, and of inorganic matter to the whole, lasts only as long as the plant continues to live. By death it loses its *status* in the ascending rank of creation, and becomes subject to the ordinary inorganic laws.

Vegetation prepared the soil for other vegetables and animals.—We saw vegetable life in the solitary and entire occupation—we say not for any length of time—of the advancing earth; we saw it in busy and diversified activity, preparing the way, in some places, both for the coming of higher orders of its own kind of life, by producing the necessary soil, and for the divine origination of that animal life which it was destined to support. We beheld in its presence, and varieties, and rapid increase, an indication that the great and provident Householder was contemplating the arrival of unnumbered guests. Now we find, not only that they have come, but that, since their first appearance, the crust of the globe has undergone many a revolution, and has exhibited many a rich and varied surface of vegetable life, crowded with corresponding forms of animated existence. While, on each occasion, there is reason to believe the same order has been observed as to the subsequence of animal to vegetable life; an inorganic change being followed by a corresponding change in vegetation; and a change in vegetation followed by appropriate species of animated beings.—*Pre-Adamite Earth.*

Germination of Seeds.

At the moment of separation from the parent plant, the seed tends to the earth by gravitation. The chemical conditions requisite for germination—moisture, oxygen, and a certain elevation of temperature—must next be satisfied. Having imbibed “moisture through its integuments, the embryo swells, the radicle protrudes, and tends downwards;” the plumule or terminal bud expands and rises upwards; in other words, the law of developed symmetry obtains. Taking firm hold of the earth, it commences its own independent existence; its conservative functions come into play in orderly succession; all of which combine to prepare the way for the higher and orderly processes of reproduction, by which its species will be continued after its own individual existence shall have ceased. Here are—“first the blade, then the ear, after that the full corn in the ear.” The order of the progression is fixed, and no power but His who appointed it can reverse it.—*Pre Adamite Earth.*

Osage Orange—Preparing and Planting the Seed.

GREAT anxiety has been manifested by some to learn the best method of treating this seed and plant, therefore, further space is allowed to the subject, even though some should feel that they were already hedged in pretty closely by the antecedents upon this topic.

Mr. Neff, in the last number, recommends the application of a thorough coat of straw or leaves, covering the whole surface between the rows of young plants. This strikes me very favorably, and would undoubtedly save a great deal of labor in the cultivation of the nursery, and if the soil had been thoroughly prepared by deep digging, the plants might grow well. Like old Tull, however, I prefer constant stirring of the soil, to admit the air and moisture freely.

The following advice is admirable, and is highly recommended to the notice of those who wish to plant the seed—even where it

is fresh, it is all the better for the preparation advised; and the little ridge made with the planter's hands, enables the owner, with a rake, to relieve the young plants from the embarrassing effort of making their *debut* naked into the presence of the sun, especially when, in clayey soils, there is a hard crust repressing the advancing efforts of their *premiere essai*.

Mr. Byram has had a good deal of experience in this plan, and great success. He advises also, that the Hedge be not planted near a dead fence. After thorough preparation of the Hedge-row, his plan of setting the plants is excellent, distance from any fence is well recommended; as to the space between them, I refer to my previous papers for advice—it is a mooted point. I must thank Mr. Bateham for his kind and judicious appreciation of my previous prelections upon this subject, and express my delight, that he is willing to admit the correctness of the views expressed, and now direct the reader to the extracts from Mr. Byram's article in the Louisville Journal.

In the first place, it is important to procure genuine sound seed. The seeds of the Osage Orange are enveloped singly in the tough and fibrous substance composing the fruit or ball. Extracting the seed without injuring their vitality is a slow and tedious process. In order to do it with greater facility, many unprincipled persons have resorted to scalding or to a high fermenting process, which entirely destroys the germinating principle.

The seed of the Osage Orange requires a high temperature to induce vegetation, and hence they should not be planted until the warm weather of spring is established, say about the first to the tenth of May. About two weeks before planting, the seeds should be placed to soak and remain in the water for three days. Not more than two quarts should be put in the same vessel. Turn the water off, cover the seed with a cloth, place them in a warm room, and stir them daily. They should be kept sufficiently moist to induce vegetation. Should

the weather prove favorable, the vessels containing the seed may be plunged in a hot-bed, where they will sprout more speedily. As soon as the germ begins to appear, they should be planted.

The ground selected for the seed beds should be rich, it should be plowed deeply, thoroughly pulverized, and finely raked. Lay off the ground in drills one inch deep, and wide enough asunder to admit of cultivation, say twenty inches. The seeds should be dropped about half an inch apart in the rows, and they should be covered by drawing the fine earth from each side with both hands, forming a ridge one inch high. In six or eight days, if the season be favorable, the young plants will begin to break the ground. The ridge should then be removed with a fine rake. This method leaves the row clean and mellow, gives the young plants a good start of the weeds, and greatly lessens the labor of the first hoeing. The plants should be well cultivated throughout the season.

The hedge-row should be plowed at least ten or twelve inches deep, and eight or ten feet wide, in the fall; or, if the land is new, it would be well to cultivate a crop of corn or potatoes on it the year previous to planting. If poor spots occur, they should be well trenched and manured, to insure uniformity in the growth of the hedge.

In the spring, just previous to setting the plants, the row should again be plowed and well harrowed. The plants may be lifted from the seed beds with facility by two persons with spades, one on each side of the row; care should be taken not to mutilate the roots. Shorten the roots to about eight or nine inches in length, and the tops to within one inch of the root.

Stretch a line where the hedge is to stand. Assort the plants, and set those of uniform size together. In setting the plants, run a long spade perpendicularly by the line to the depth of the root, making an opening *without removing the earth*; withdraw the spade, and insert the plant full as low as it grew in the seed bed. Press the earth to the root by entering the spade again just back of the plant, pressing the earth forward. Set the plants in this manner, about *ten* or *twelve* inches apart, according to the strength of the soil, in a single row. After setting, the ground

should be firmly trod on each side of the plants and again leveled off. In order to secure the advantage of the requisite light and a free circulation of air, and to leave room for thorough cultivation, the hedge should never be planted within six or eight feet of any fence. The row should be kept free from weeds and thoroughly cultivated during the season.

One great error has been committed by nine-tenths of the persons who have attempted to grow the Osage hedge, and that is, they have been too impatient to complete the hedge before they had secured a foundation on which to base it. A hedge sufficiently firm and compact at the bottom *cannot be grown without severe and repeated cutting back*, in order to insure strength to the lower and lateral branches. This must neither be neglected nor delayed beyond the proper time, or all the previous labor will be lost. The season the plants are set in the row they will require no regular pruning, but, should any of the plants assume a too vigorous upright growth, they should be checked by cropping their tops with a long knife. This can be done as fast as a man can walk. The spring after the plants have been set, they should be cut off to within *three* or *four* inches of the ground. In consequence of cutting off the tops at the time of setting, each plant will have produced three or four shoots. The second cutting will cause them to multiply to six or eight, nearly filling the space between the plants.

Cultivation must be continued the second year as before. About the middle of June, or when the plants appear to be making the most vigorous growth, they must be again shortened back to within *three* or *four* inches of the last cutting. In order to give size and strength to the lateral branches, and to secure a close and compact base to the hedge, these summer prunings must not be delayed. Continue to repeat the spring and summer prunings until the *fourth* or *fifth* year, cutting off the side and bottom branches so as to form the hedge about three feet wide at the bottom, gradually narrowing toward the top, to about four or five feet in height, when it will be sufficiently formidable to turn any stock upon the farm, and so close at the bottom as to render it difficult for a rabbit to pass through it.

The experience of the hedger by this time must suggest the subsequent treatment.

For trimming the hedge, a common hemp hook with a long handle, and the hedging shears, will be found the most convenient implements.

THE ARBORETUM.

Magnolia conspicua—Is a native of the district of Yulam, China. It is perfectly hardy in all the middle States. The tree is of a beautiful conical form and rapid growth; it attains an altitude of about forty feet; when covered with its tulip-like white flowers it is a very attractive object, and as it blooms previous to the expansion of the leaves is one of the earliest harbingers of spring. It is entirely free from attack by insects, and is unsurpassed as a lawn tree.

Maclura aurantiaca, *Osage orange*.—This magnificent deciduous tree is found in abundance in Texas and all the southwestern States. It is not sufficiently appreciated as an ornamental shade tree; very rapid growth, very graceful in its outline, and has the excellent quality of retaining its rich glossy green leaves until extreme frost. As a hedge plant its merits are fully appreciated, and in that form is being rapidly diffused over our country.

Acacia julibrissin.—The "silk tree," of the south, is hardy in light soils south of New York. It is a most beautiful shrub, producing in clusters numerous tufts of straw-colored flowers. The leaves are beautifully compounded, very graceful, and of a light sea green color; the contrast of the flowers and foliage is very striking.

Halesia tetraptera.—The "silver bell" or snow drop of South Carolina, is a beautiful tree, quite hardy in all the middle States and growing to the height of forty feet. The form of the tree is compact, and when covered with its innumerable bell-shaped silvery flowers, produces a fine effect. If permitted to branch low, it is quite unique in the landscape.

Rhus cotinus.—The Venetian sumac, smoke tree, mist tree, and brown fringe tree, for by all these names it is known, is a first class shrub, very singular in appearance when in bloom; when in clumps with others shrubs of same size and different foliage it has a fine effect, and ought to be more extensively cultivated.

JAMES D. FULTON.

Philadelphia, Oct., 1851.

Farm Journal.

Michigan Evergreens.

A valued correspondent, writing from Kalamazoo, Feb. 14, 1852, says:

DR. WARDER—

* * * * *

We shall soon form a Horticultural Society in this place. There is perhaps no State in the Union where the ornamental gardener has a wider field to select from than Michigan.—In the list of Evergreens, we have the Balsam Fir, which grows at Mackinac, and on Lake Superior; the Norway Spruce [?] the White Spruce, and Arbor Vitæ, also grow with the Fir tree at Mackinac.

We have also a Spruce growing in part of our swamps, called by some Black, and by others White Spruce, which is regarded by us as one of the finest of Evergreens; its growth is vigorous and beautiful, with a deep green appearance, and forming a most perfect cone.

The White Pine is found in great abundance on our largest rivers—and surely no evergreen presents a more lively and agreeable appearance than the Pine. The Hemlock is also found near the mouth of our rivers emptying into Lake Michigan. They grow in the open grounds, and are of most perfect and beautiful form, the lower limbs branching out near the ground, far surpassing in beauty those that are seen in the forests of New England. There are also the Red Cedar and Juniper, with their deep green, at times shaded with crimson, both growing on the banks of the Kalamazoo and St. Joseph rivers, near their entrance into the Lake.

All the above varieties are growing where they can be easily procured, and sent to any part of the country.

I have had some experience in transplanting them; and find the most important rule to be observed in their removal from where they originally grow is, to keep their roots from the sun, air, and cold, as they have no

fibrous roots to retain the earth around them during their removal, and being resinous, they become dry much sooner than the roots of deciduous trees. I have transplanted them in the spring and fall, with equal success. After being planted in the nursery, they will throw out great quantities of fine fibrous roots, which enables them to retain a sufficient quantity of earth to make a second removal perfectly safe.

We have also the American Larch, or

Tamarack, growing in the open grounds near our marshes. They can be transplanted with perfect success in the spring, and when grown in the open lawn, they assume a beautiful cone-like appearance. I am of the opinion that the Juniper and Red Cedar would make a good hedge, as they grow very compact—particularly the Juniper, which has sharp points to its evergreen leaves.

Truly yours,

A. T. PROUTY.

Frontispiece.

A SOUTHERN HOME.

THE illustration for this month is a suggested house for a southern climate, which has been furnished by the author of *RURAL HOMES*, from which work the following description has been condensed for these pages, omitting some of the suggestions and explanations of the author, but retaining all that is essential to the correct understanding of the plan and elevation.

He says that the first element in a house in the sunny South, is space for free ingress and egress of the breeze,—space, too, that can be convertible into habitable apartments. What in a northern house would be considered ample provision for architectural shade, as veranda, porch, and ombra, does not suffice in the climate of the South. The construction should be strong but simple, the eaves and gables projecting, the piazzas extensive; the windows should be large, and above all things, should nearly occupy the entire height of the room, so that ventilation may equally be applied to the ceiling and the floor; the doors, both external and internal, should be double, one being a close pannelled, ordinary door, and the other with slats that will open to admit a current of

air, and at the same time give seclusion to the room.

The internal arrangements and distribution of the rooms should be such, as that the kitchens and domestic offices may be cut off from the main building, and yet be so near as to allow all the machinery of living to be fully attended to; the dining or living room may be on the side nearest the kitchen buildings, and connecting them together, may be an airy, well-lighted vestibule, containing on the one side a waiter's pantry, so arranged as to open upon the sideboard in the dining-room.

The house itself should have wide and spacious halls, by which ventilation can be served, running across each other, and convertible into separate apartments by the use of sliding screens.

The plan annexed shows the arrangement of the rooms. A wide and airy veranda surrounds the house, stopping at the connecting building between the main house and the domestic offices.

No. 1 is a wide hall running through the building, and opening by means of double doors upon the veranda floor.

No. 2 is the library, a spacious and airy room, opening *en suite*, by means of double doors with the boudoir, No. 3, and thence with the drawing room, No. 4. The boudoir or vestibule is made with wide folding doors, shutting it out from the entrance hall, so that the entire space might be thrown open.

No. 5 is the dining room, of the same large size as the library and drawing room on the other side of the entrance hall, and in the corner of the main building most accessible to the kitchen.

No. 6 is a large chamber, eighteen by sixteen, with an alcove at one end to contain a bed, and communicating with a dressing and bath room, No. 7.

No. 8 is a gentlemen's dressing room, opposite the dining room door, its entrance being under the staircase, it is secluded, and yet easily reached.

No. 9 is a large hall closet for hats, shoes, etc., and adjoining it is a smaller closet for brooms and other articles in daily use.

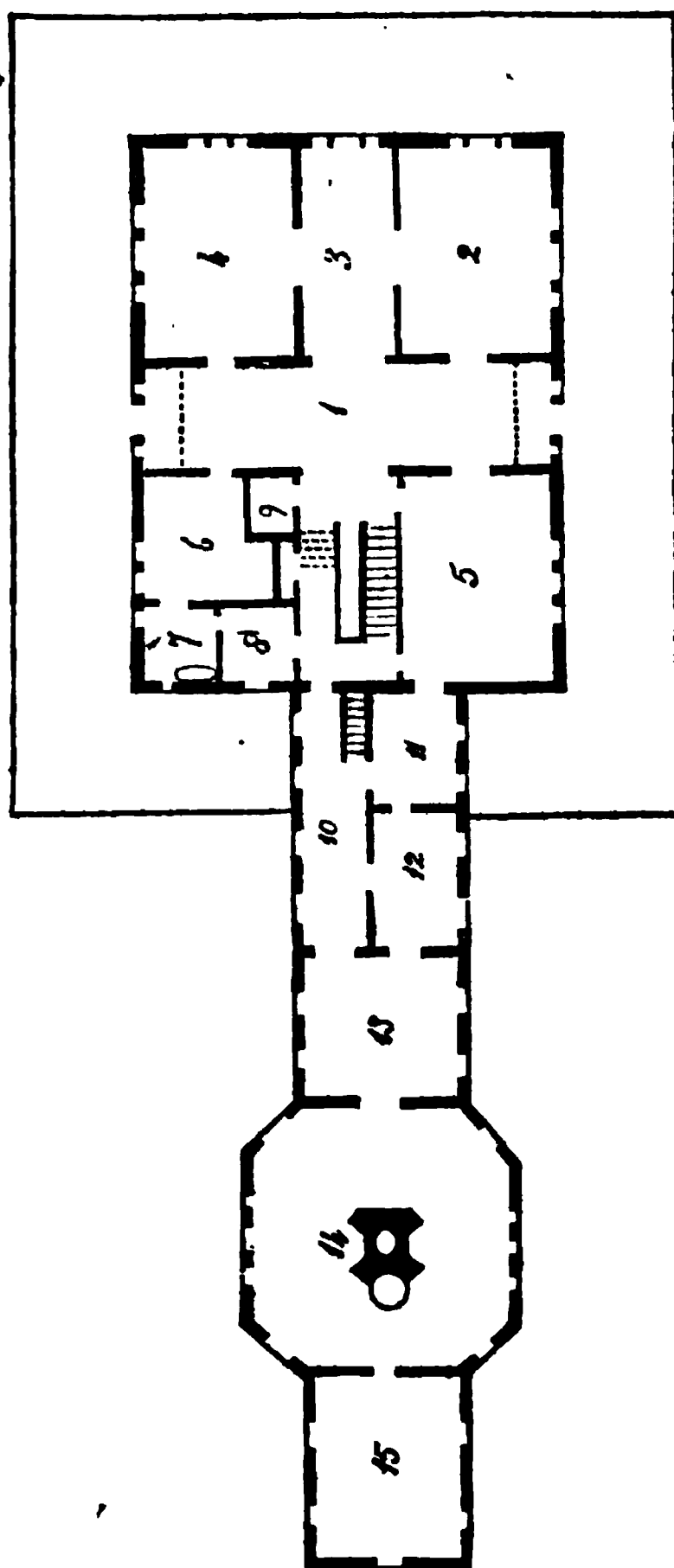
No. 10 is a corridor leading from the dwelling portion of the house to the kitchen buildings, and contains the back stairs to the chamber floor.

No. 11, a large pantry filled with shelves, and every convenience for a waiter.

No. 12, a light and airy room, containing presses for china, glass, and such dry stores as would be desirable.

No. 13, a serving room, whence the servants would convey the dishes to the waiters' pantry, from which room they would be at once placed upon the sideboard or table in the dining room.

No. 14 is a very large, irregularly, octagonal kitchen, with the cooking apparatus in the center, and No. 15 is a servants' hall, or outer room, connecting with a laundry and other domestic offices. The peculiarities of the plan are space, simplicity of arrangement, and facilities for ventilation.



The rooms on this floor in the dwelling part of the house, are fourteen feet and a half high. On the floor above would be many spacious chambers. In the center, the principal stairway would enter upon an upper hall, ten by twelve, which, carried up to the roof, and then beyond it, as a species of tower, would give an airy and pleasant circulation to the inner atmosphere of the house.

This plan, and the elevation given in the FRONTISPIECE, are presented to the readers of the Review in the hope that it will please some, who may be in want of information of this character.

The Garden.

A FEW REMARKS ON GARDENING.

THE word gardening embraces a variety of subjects. In it are comprehended the cultivation of vegetables, fruits, and flowers, all of which are described under distinct heads. For the present it will be the object of this paper to treat chiefly of the smaller fruits, such as are grown in all well conducted private gardens. These articles occupy but little space, and are easily cultivated. In the first place, the cultivator must have his grounds in a highly improved state, as few soils in a state of nature are suitable for a garden. It requires a compound, in which clay, sand, lime and animal manures are intimately blended. If the natural earth, like that of the writer's, on which the garden is to be located, is a stiff clay, in the autumn a dressing of two inches of sand, two of stable manure, and a thin coat of lime/ or ashes, should be spread over the surface, and the whole turned up to the depth of twelve or eighteen inches by the plow or spade, so that the frosts of winter shall pulverize and decompose the clay, and it may readily mingle with the sand and manure. If thrown into the form of ridges it will be all the better. In the spring it should be turned over again before planting with the various garden seeds, which must be adapted to its crude state. By pursuing this process, every autumn for six or eight years, the soil of your garden will be converted into a fine, light, mellow mold, producing good crops of any thing you choose to commit to its bosom.

On the contrary, should the soil you have selected for a garden be very sandy, a dressing of clay must be applied with the manure and other articles. Where the vegetable portion of the soil needs to be

renewed, the sods pared from an old pasture and piled up in a heap, with the grassy sides down, will decompose, in the course of a year so as to afford a nice renovating article, and if a layer of fresh stable, or hog pen manure is placed between each stratum of sods, it will add greatly to its value and facilitate its decomposition. This artificial soil is well suited to the growth of most kinds of flowers, as well as fruits, especially for plants cultivated in pots; the loose, open texture of the compound affording easy access to water and air, with a free growth of the roots. For strawberry plants, cucumbers, and melons, no soil is more congenial than that derived from rotten sods. When the grounds are prepared and arranged as you wish, plant out in rows as many raspberries, gooseberries, currants and strawberries, as the wants of your family require.

The raspberry, in my estimation, stands at the head of the small fruits—it is so delicious when fresh, and retains its rich flavor so perfect when preserved in sugar for winter use, and is withal, so easily gathered, in comparison with the strawberry, that it is a very desirable fruit. There is also such a variety from which to select, some of which are monthly and thus prolong the season. The foreign kinds, which are the only sorts really worth cultivating, [?] are killed to the ground by severe winters in our variable climate, except in some favored situations, where the sun's rays can not fall upon the plants, and even then a hard winter, with the temperature a little below zero, will destroy them. The only safe course is to lay down the canes carefully on the ground in November, and cover them. For some

years my practice was to protect them with a layer of two or three inches of earth, this is easily done when the plants are in rows, laying the stems in the line of the rows. It was found, however, that the wet and moisture of the earth continuing for four or five months, injured the bark of the canes, destroying many of the fruit buds and weakening the plants. Laterly it has been my practice, just before the setting in of winter, to take a board twelve or sixteen feet long, and with the aid of an assistant, press it lengthwise against the stems, until they are bent to the ground—with the addition of a few bean poles, or another board they are kept in this position; over this is thrown a layer of corn stalks, bean vines, tomato tops, etc., to the depth of four or five inches, so as to protect them from the sun and the severe cold of winter—with the addition of three or four more boards, a row of fifty feet is soon prostrated and readily covered with the refuse of the summer crops. From beneath this covering your favorites may be raised up early in April, looking fresh and vigorous, ready to repay all your care, with a full crop of fruit.

The red, and straw colored Antwerps, are the kinds chiefly cultivated in my garden. The Franconian and Fastolf, have not proved any more hardy than these old favorites. It is to be hoped that some of the new varieties, raised from seeds in Philadelphia by Dr. Brincklé, will prove more vigorous. The native red raspberry of the New England states, especially Maine, is a high flavored fine fruit; perfectly hardy, unless it may be injured by the cold of this present winter, with the temperature at 23° below zero, a degree not often felt in Massachusetts or Maine. A row of them in my garden will show how hardy they are, when the spring opens.

The seeds of the foreign raspberry sport

as variously as the strawberry. In 1840 the dried fruit from a large black variety of the Antwerp, grown in New Bedford, Mass., was sown in a garden in Ohio. The plants, when old enough to bear fruit produced three kinds; straw colored, red and black. The plants of the latter, the one looked for and expected, being in much less numbers than either of the others; showing this variety to be only a sport of nature and not a distinct kind, and therefore only to be propagated by layers, or suckers from the parent stock.

The same mellow soil, which has been made by the above process, will also produce the finest foreign gooseberries. Cultivated in single stems, with open tops, the fruit is less liable to blight in our hot, humid atmosphere, than when grown in clumps. A sprinkling of salt on the ground, and a coat of spent tan, four inches thick, under the bushes, will prevent in a great measure the mold on the berries, as well as make them large and fair.

S. P. H.

Marietta, Feb. 6, 1852.

The writer of this communication having conferred a favor upon me has my thanks—the paper should have appeared in the previous number, but was just too late for its appropriate department.—ED. REV.

Geraniums and Pelargoniums.

I OFTEN find myself in a dilemma with some of my window gardening friends. Convinced of the importance of cultivating plants in windows, not only as a medium for conveying refined pleasure, but as an influence for bettering and elevating our moral sensibilities. I have frequently tried to meet a great many real, and provide a few imaginary cases, and yet I get frequently reminded that what I have said is, no doubt, applicable to many others, but it does not meet that or this individual's circumstances. For instance, here is a friend who tells me, that I have said much about

what may be done in a window where there could be a box, or any other come-at-able convenience covered over with glass, glazed muslin or wooden boarding, moveable at pleasure; "but that is all of little use to me, for I have *nothing* but my window. I have no space on which to fix box, pit, or any other concern of an *omnium gatherum* character. All the *terra firma*, in its natural condition, I can call my own, is enclosed in the boxes and pots, inside and outside the window sill. Geraniums, or as you please to call them, Pelargoniums, are my special delight, and I read with something like *horror* your incessant talking about cutting them down. To be sure, mine are getting rather spare in leaves and flowers and somewhat *leggy*-stemmed into the bargain; but as the peasant will tell you, that 'half a loaf is better than no bread,' so say I, that a few flowers are better than none; and that the sight of the poor plants, docked, snubbed, and snagged before they break again, is enough to put an enthusiast like me, into the *hyps*, to say nothing of the blues and the yellows." Now what is to be done in such a case as this? Hint about getting a fresh young stock, and that plants are so cheap, and you will be stopped with the assurance, "expense, indeed, who cares for expense; but shall we realize the same associations with the new, as we have revelled in in company with the old plants?" Fortunate we may reckon ourselves, if we can get our friends to submit to present inconvenience from the cutting down of the plants now, in the hope of enjoying stubby growth and green foliage during the winter, and abundance of bloom early in the following season. Looking then in such circumstances, upon present sacrifice as indispensable, I shall shortly glance at some of the means for *lessening*, if not *precluding* such a disappointment in future.

First. Then, harden off your most exhausted plants before cutting them down, by placing them outside the window, exposed to sun and air, and giving no more water than will just be necessary to keep them from flagging greatly in the middle of the day. You will have observed that this has previously been recommended for concentrating the peculiar juices of the plant, and getting rid by evaporation, of the more watery juices; in fact, doing what is tech-

nically termed *ripening the wood*. Your plants must not remain there long, as the season is fast advancing. According to the present firmness or sponginess of the shoots and the bright sunshine, or dull weather, you may allow them to receive this treatment from seven to fourteen days. Then—

Secondly. The plants should be cut down, shortening the shoots just beyond one, two, three, or more joints from the base of the limbs, the first or second length being best for windows, as insuring small plants and shoots well home. After being cut down, the pots may remain outside, and still for some days without water, until the buds begin to break, when moisture may very moderately be given, with frequent *sprinklings* over the *stem*, just to moisten them. A day or two, however, will be enough for the plants to stand *outside* the window; they will get on better *within* with a muslin curtain between them and the glass on very sunny days. When the young shoots are about half an inch in length, the plants should be re-shifted, divesting the roots of most of the soil, shortening the very weak and straggling roots a little, and placing them in a clean pot, either of the same size, or, better still, a size smaller than the old pot, and in nice mellow, light, rich soil, watered and placed again inside the window, and the curtain brought into operation again on very sunny days, until root-action has proceeded so far as to enable the plant to stand fully exposed to sun and air. If you put the plant in a smaller pot, and have no pit, it will be advisable to avoid giving it more pot room until March or April. Now by merely stopping the points of a young plant raised this summer, you would have a nice looking plant all the winter, at less trouble than you would experience, from all this ripening, cutting down, and repeated repottings, and very likely, better foliage all the season too; but the quantity and quality of the flowers produced by the young and the old plant, would bear no comparison, it being a universal law, that the extreme of luxuriance and the extreme of productiveness are produced by causes the opposite to each other. But what has all this to do with preventing the annoyance of having the window filled with snagged plants? Just this: your cutting down must not be done

at any regular season, but one plant at a time, choosing the most exhausted in flowering first, and then making a cutting or two from every plant thus cut down, keeping *them* in small space, as respects soil and pots, until, when a large plant is thus lessened, room can be given to one or more smaller ones to supply its place. By following up this plan, there will always be growing and interesting plants in the window, and the only regret will be, at every season you will be under the necessity of parting with some for the want of winter room; but this if you have neighbors, may be easily exchanged from regret into a pleasing satisfaction. During autumn and winter, a few inches space between the larger plants will contain young struck cuttings sufficient to fill as many feet in summer. And, here again, the drying or ripening of the shoots before cutting down at once will be apparent, as such cuttings will bear an amount of hard treatment that more spongy, soft, better, and more vigorous-looking ones would at once sink under. I once, like many of our inexperienced friends, held a different opinion. Every thing is simple when known,—not before. The following fact convinced me—any one may test it by practice. A great many years ago, just when putting in geranium cuttings, a packet of fine ones, (cuttings I mean) was sent to my employer, wrapped in brown paper. Dire was my dismay on unwrapping them,—the shoots were like heart of oak, bark tightly shrivelled, and the leaves would have made snuff if rubbed between the hands, only they were not tobacco. Well, these cuttings not only struck with a tithe of the trouble of my own favorites, but, do what I could to help my own cuttings on, the others made incomparably the finest plants during the season. The above is the best treatment I can think of for the established florists' favorite pelargoniums, which generally bloom freely only for a month or two. But—

Thirdly. A few of these of the older kinds will keep throwing up a succession of bloom nearly all the season, if the points of the shoots are now and then picked out before the bloom buds, the leaves kept well washed, the decaying flowers and leaves removed, and the roots well supplied with weak manure water. The old *Admiral Na-*

pier, *Alexandria*, *Victoria*, and *Alba Multiflora*, may be taken as a type of this class. These I have seen in 48 pots, in admirable condition, in London, from the end of May to the end of October; and it would be difficult to say WHEN they were fullest of bloom: but they were attended to. The last named used to sell by the thousand in Covent Garden. Then again—

Fourthly. There is a group of long jointed geraniums which continue to produce masses of flower heads as they continue to grow. There is nothing taking in the habit of the plants, which is clumsy and straggling, but the flowers are generally produced continuously, so long as there is heat given for their due expansion. So far as I recollect, the old *Daveyanum* may be considered a type of this group; and so may the old *Jenkinsonii*, with its scarlet flowers, which bloom continually, either in pot, bed or basket; and who would not at once think of the beautiful crimson *Rollison's Unique*, that will carry several fine heads of bloom in a four-inch pot, with double the quantity opening and showing flower buds, ever appearing as growth is proceeding.

Fifthly. I may instance a half fancy group with *Diadematum*, and *Diadematum rubescens*, and the beautiful light rose colored *Sidonia*, included among them. The latter even in a bed, producing fresh flower buds for every half inch of growth, whether in a lateral, or an upright direction, and unlike *Unique* and its allies, maintaining a compact, firm, dwarf habit of growth.

Sixthly. Fancy Geraniums. The greater portion of these, from blooming so freely, will be rendered almost continuous bloomers in windows if they obtain the privilege of almost continuous pruning, removing first the decaying flowers, and then the flower stems down close to the stem from which they issue as soon as they become exhausted—and giving rich waterings. Even in their case, a few young plants will be useful, and success will depend upon the treatment given, and the removing of every part of exhausted extraneous matter. Under roughish treatment, even these plants will bloom more than double the time in windows that the finest florists' varieties will do; and in almost the whole of them, old and new, the habit is compact and the foliage small—smaller of course in the old-

est plants. The beautiful, scented, small leaved kinds—such as *Citriodora* and *Prince of Orange*—will continue to yield their flowers and their perfume, and the soil for this group should be *lighter* than for the others. I have not had great experience in trying to prolong the bloom of fancy kinds in pots, and especially of the newer kinds, but from the success with some in boxes and beds of small size, I could recommend *Yatemanianum grandiflorum*, and *Statuiski* as dark ones, and *Queen Victoria* and *Bride of Abydos* as light ones, for our inexperienced friends to commence with in their windows. The general management has been given in several papers.

Lastly. For continuous blooming, the scarlets are invaluable. Those from the *Frogmore* breed are the best for this purpose; the leaves being small, and the trusses of bloom comparatively large—such as *Ingramii*, improved *Frogmore*, the old *Frogmore*, and *Tom Thumb*. The latter is a fine fellow in a pot, and to have him in bloom all the summer requires merely the picking out the point before a bud, now and then, and giving him plenty of water. A little rich top dressing will often be of less trouble than keeping a barrel of manure water. He finds no fault either with guano or super-phosphate of lime, but you must not dung him; one ounce of good guano is sufficient for two gallons of water. *Judy* is also a very free flowering variety, with pinkish red instead of scarlet flowers—very pretty though the individual trusses are not large. This and *Punch* are great pets, and deservedly so. I can not speak so highly of *Punch* for a window plant as of *Tom Thumb*, as he grows stronger, and does not in a pot bloom so continuously, even though you may contrive to hunger him in his feeding propensities. But if you can afford to give him the best part of a window to himself, and want to astonish yourself and delight your friends with some magnificent trusses of the most beautiful scarlet, then by all means have a nice little plant as soon as you can. I will not tantalize, alarm, or render you incredulous, by mentioning the circumference of a truss, and the number of flowers it contained, any more than I should like to mention the dozens of scores of bloom I counted upon a flower stalk of the *Kentish Hero Calceolaria*. I had much

rather let you grow, and count, and admire for yourself. The *Punch* is very well in a bed, but to see a glorious truss he must have a pot, and the protection of glass. For all this group, where dwarf growth and free flowering for windows are concerned, two things are essential: stinted nourishment, when enough of growth has been obtained, until the flower buds appear, and then, as rich feeding as the plant will stand. Mr. Beaton has detailed the superiority of old plants for flowering upon the "Harry Moore system," and, were I ever so willing I could add nothing more. R. FISH.

Cottage Gardener.

Here is another excellent article upon this favorite class of plants,—it is adapted to greenhouse culture:—

General Management.—Autumn plants, that were cut down after the bloom was over, will now have made some shoots. Those that are in large pots should be turned out of them, have most of the soil shaken off the ball, the roots trimmed in considerably, and be re-potted into much smaller pots, in a compost not too rich, the object being now to cause them to grow slowly, and make short, stout shoots, in moderately sized pots. Those that are in small pots, and have been cut down, will not need re-potting now, but a little top dressing will be of service. Cuttings struck newly, and potted off when rooted, should be re-potted immediately, and their tops nipped off, to cause them to branch and make bushy plants. Seedlings, if not potted off singly, should be attended to at once; such as were potted early, will now require a slight second shift. Seedlings should not be stopped, because the florist will naturally wish them to flower as soon as possible, and taking the tops off has a tendency to retard early bloom.

Winter Management.—During this dreary season of the year for plants, pelargoniums will not require much manipulation. Strict attention in giving plenty of air on all favorable occasions; keeping the house as dry as possible; giving a due supply of water, but no more; pulling off every decaying leaf as soon as it appears, and keeping the surface of the soil frequently stirred, to prevent moss growing, are the main points to attend to during winter. The temperature of the

greenhouse during winter should never exceed 45° , nor fall lower than 34° or 36° . Too much heat is quite as injurious as too little. If kept too warm, the plants will be drawn up weak and spindling; if too cold, the leaves will turn yellow, or spot, or damp off, all of which are fatal evils in pelargoniums cultivated for exhibition, or, indeed, for any purpose. It will, we fear, be always necessary, in this country, to use artificial heat during winter, for these plants do not seem to become any hardier, or, in other words, more capable of enduring any greater degree of cold than they did when the original species were introduced from the Cape of Good Hope, more than two centuries ago.

Spring—As the days lengthen, and the sun, with his invigorating power, causes vegetation to push forth into fresh foliage and flowers, it will be necessary to give to the pelargoniums the due attention this season requires. In potting them, care should be taken that it is not overdone. Buds should be visible first, or the plants will continue to grow, and will not flower until late in the season. Many an anxious exhibitor, desirous of having his plants large and firm, has split upon this rock. *Again*, the size of the pots should be taken into consideration. The grand collections exhibited at Chiswick and the Park, are generally grown in, comparatively speaking, small pots. A plant two-and-a-half feet high, and three feet through, is placed there in a pot only eight inches diameter. The support of such an enormous mass of branches, leaves, and flowers, is supplied by means of liquid manure, given at intervals only, and in a diluted state. It is in proportion to the skill and attention bestowed upon these plants, that such men as Messrs. Robinson, Turner, Gaines, Parker, Cook, and a host of others, succeed in producing such noble specimens. The two grand points being—First, to grow them into a good size and fine form; and, secondly, to give them just sufficient support to produce abundance of bloom, without too gross or large foliage.

Training.—During spring, attention must be given to tying out the plants, so as to give the best form to them. The day of flat, sloping tops, with a bristling phalanx of sticks, has, thanks to the good taste of both exhibitors and judges, passed away. The great object, now, is to hide every appear-

ance of art in training them, using but few sticks, and those kept out of sight as much as possible. A good plan is to tie round each pot a broad piece of bass mat, and when the shoots are long, to bring them down and fasten with short pieces of bass to the piece which is tied round the pot. This does away with the sticks, in a great measure, and gives a direction to the branches, so as to open out the center, and allow more air to the whole.

Summer.—The plants will now be in their greatest beauty, and will require shading, to prolong the season of bloom. Too much air can not be given, and to prevent the approach of bees, and other honey sucking insects, the apertures where air is admitted should be covered with worsted, or some other netting. It is found by experience, that if bees are admitted, they, in gathering their food, carry the pollen from flower to flower, and scatter it upon the stigma, the consequence is, the petals of flowers so covered with pollen drop off much sooner than if no impregnation had taken place. This is a point worth attending to by persons growing for exhibition; for if the flowers in bloom to-day can be preserved by such simple means until to-morrow, the bloom that will open on that morrow will do the same, and there will be a greater number in flower at once, and, in consequence, a greater chance of winning a prize, besides rendering the plant longer attractive. As the weather is, during this season, often hot and dry, a much larger amount of water is required; frequently twice a day will be necessary. If a dash or two of water were thrown upon the floor occasionally, during hot sunshine, it would create a moist and cooler atmosphere. Insects may abound, especially green fly—smoke frequently with tobacco, to destroy them. As the plants go out of bloom, cut them down, and set them out of doors to be re-potted, as directed in the autumn.

T. APPLEBY.

Cottage Gardener.

There are those here who may profit by the seasonable hints contained in the foregoing articles, which are from practical men, who do know, that they write. Some of our gardeners understand the principles of growing this family, and have fine stocky plants.

Mr. Glenny on Florists' Flowers.

THE comments which appear under this head are displeasing to some persons, but only to those who would be benefited by contrary decisions. We regret giving annoyance to any one; but we must pursue our honest course without regarding any thing but the attainment of truth. We shall continue to select for our readers what we consider the best of every thing, and if they limit their purchases to the varieties we recommend—no matter whether in fruit, flowers, plants, or vegetables—they may rest assured they will waste but little on bad things, and miss few, if any, good ones.

When, first and last, considerably more than one hundred *Dahlias*, were actually advertised, last season, as first class varieties, what was the amateur to do? He could only rely on the vendor's description, because all were said to be *good* form, *fine* this, *splendid* that, and *grand* the other, and more than half were *warranted to be best in their class*. What could we do, but honestly select a score or so of the best, fairly describe them, and leave the public to "do as they list?" May we not, with satisfaction, point to the result? Has our description proved incorrect? Which of the hundreds we refused to notice at all has proved worthy of a place in the garden of an amateur?

All we regret is, that there are persons who, notwithstanding our caution, buy every thing we describe, as if we adopted them all; whereas, we only describe them as the best among many bad ones, because they are to be put out as first rate varieties, and have, perhaps, had sundry certificates; but our descriptions are not all alike tempting, though they are all alike just. A dead set, it is true, has been made at the dahlia *King*, by some. Great pains have been taken to show it in a bad state, to run it down; but, notwithstanding this, it has proved itself the most perfect model in cultivation, although it does not attain the size which a vitiated taste seems to demand; and we have been doomed to see, all through the season, head prizes run away with coarse specimens, which were bad in the outline, low in the centers, and quilly in the face, although evidently submitted to all manner of poking to open their puckering petals, and a system of dressing to which no gentleman would submit. If the respectable amateurs do not

by some means check this, the Dahlia will decline. Whether this check is to be by making new classes with a limitation to the size, or by the taste of properly constituted censors, we are yet to guess; but there is neither art nor credit in growing large flowers, *size is invariably attended with coarseness*; and unless those who wish to see their gardens neat, and their plants natural, their borders free from props and tables, shades and inverted pots, can devise some means of exhibiting flowers for compactness, symmetry, and form, instead of size, they must submit to be beaten by flowers grown large, but which have no other recommendation. The present season introduces us to several other flowers, which may not be acceptable to the dealers in monsters. Dr. Frampton, and Sir F. Thesiger are models in their way; but they may not please those who seem to have but one notion, and that a coarse one. Dr. Frampton's is especially a model—we have already noticed it—a light flower, as complete as *the King*, but without the King's great fault, a reflexed petal. Still, unless we can break the neck of the washing-tub system of showing, these models will be useless. *Sir F. Thesiger* is one of the best rose colors in cultivation; there is no pale, sickly center, no fading outside; it is a dense color from center to base, without a shade of difference between the unopened petals in the middle and the under row of all. We only mention these things in illustration of our objection to the barbarous system of judging Dahlias by the foot.

The finest of the large flowers in many stands have had petals standing out, or at least uncovered, more like the bowls of teaspoons than the petals of flowers, and we do hope and trust that if vulgar tastes are to be pampered by the exhibition of mops, societies will also cater for the true florist, and make a separate class for form and symmetry, or secure judges who will uphold the true principles of floriculture. We are fully aware of the unpopularity of small flowers, and of the stand that will be made against them by people whose soil and situation produce them large; but unless we are prepared to abandon form, doubleness, symmetry, and compactness, something must be done, otherwise we shall soon be divided into two classes of amateurs—one class who can depend on each other for

showing with taste and fairness *naturally-grown* flowers from their own gardens, and another that rely on all manner of trickery, dressing, and designing, for their success.

We are exceedingly anxious to see gentlemen who have abandoned the pursuit, and deserted the exhibition, induced to return to it; but it can not be expected they will submit to compete with those who resort to unfair means to obtain prizes. Hundreds who have entered into the spirit of showing, have given up showing Dahlias, except as border flowers; and unless exhibitions can be brought back to the indulgence of a wholesome and honorable emulation, we shall lose many more. Dealers must uphold the principles of floriculture, and not pander to coarse tastes, before honorable men will venture to show. Let any reasonable man ask himself what situation he would have been in, had he bought all that had been warranted to be good? His Dahlia bill alone would have been sixty pounds, and he would not have five pounds' worth growing the next year. It will take a little fortune to buy only those which have had certificates and commendations from societies; and when bought, not one in three would be found so good as we possess already. If, then, we venture, at the close of the season, to point out the few that may be worth buying, we may curtail the number of bad ones purchased, but we shall add largely to the sale of those worth an amateur's notice. We are daily receiving a number of seedlings, and shall make strict notes of all worth sending out; but, as those who have any thing really good are sending us blooms over and over again, to prove constancy, while a vast number of seedlings are only now coming into bloom, we reserve positive opinions while there is a chance of a flower retrieving, (what if we decided at once would be,) an unfavorable character, we will not hastily condemn. But we confess that we shall not give size a single point in a seedling, nor shall we mention as first-rate a flower that wants an hour's torturing to open quilled petals, to bind down those on the face, to make the eye appear naturally higher. These tricks with seedlings are unworthy, simply because they disguise a flower, and deceive the buyer. If a flower is naturally quilled and sunk in the eye, it is comparatively worth-

less. How is it that one man can show a flower which hardly any body else can produce fit to be seen? Simply because he is clever at dressing and distorting. We know we shall have respectable cultivators with us in resisting and opposing such pretensions, although just now there are too many interested in supporting them.

We have seen a flower, totally unfit to show, mauled about with the tweezers until an open eye has been closed, and quilled petals have been, by great patience and application, opened. This is not floriculture; it is tricking, and most unworthy; for the flower that wants it is useless to a gentleman who is deceived into buying it.

Deutzia Gracilis.

THIS is an extremely graceful, fine, hardy shrub, and no doubt it will become a favorite pot plant with those who enter the lists of competition for the prizes offered by the great London societies. We risk our reputation in placing it next in importance to the *Indigofera decora*, another hardy, or nearly hardy, plant, with which Mr. Iveson, the skillful gardener of Sion House, surprised the gardening world three years ago, and at each of the May Exhibitions since; and, without aspiring to the spirit of prophecy, we predict that the same intelligent gardener will gather a good weighty medal for a *Deutzia gracilis* next May, at one or other of our metropolitan gatherings. The Messrs. Veitch of Exeter, introduced it last spring on the London stages for the first time, when every one who saw it is said to have admired it much.

The genus *Deutzia* was named by Thunberg, the Swedish botanical traveler, in his *Flora Japonica*, which appeared in 1784, to commemorate the name of John Deutz, a Dutch naturalist. This species, *gracilis*, is a native of Japan, whence it was introduced first to the continent, by Dr. Siebold, whose name has been long associated with the Japan flora, and who, with Professor Zuccarini, has produced a very fine work on the Japanese plants. According to Dr. Siebold's account of *Deutzia gracilis*, it grows to six or seven feet high on its native hills, and no doubt it will attain that size, if not more, under cultivation. The genus is an Asiatic one, and belongs to the natural order, *Syringæ* (Philadelphiacæ), and to the third order of

the tenth class in the system of Linnæus, *Decandria trigynia*.

Deutzia gracilis has long, flexible, and generally, drooping branches; *leaves*, between the wedge, and spear-head shape, finely toothed on the edge, and fine haired on both surfaces; *flowers*, white, in panicles or loose bunches at the end of the branches; calyx pitcher-shaped, petals bluntly reversed, egg-shaped, rather hooded, and fine haired on outer surface; stamens in two rows, anthers yellow; styles three.—*Magazine of Botany*.

Substitute for Glass on Hot Beds.

TAKE white cotton cloth, of a close texture, stretch and nail it on frames of any size you wish; mix two ounces of lime-water, four ounces of linseed oil, one ounce white of eggs, two ounces of yolk of eggs, mix the lime and oil with very gentle heat, beat the eggs separately, and mix with the former. Spread this mixture with a paint-brush over the cotton, allowing each coat to dry before applying another, until they become water-proof. The following are some of the advantages these shades possess over glass ones:

1. The cost is scarcely one-fourth.
2. Repairs are easily and cheaply made.
3. The light:—no matter how intense the heat of the sun, the plants are never struck down, or burnt, or faded, or checked in growth; neither do they grow up long, sick, and weakly, as they do under glass, and still there is abundance of light.
4. The heat, arising entirely from below, is more equable and temperate, which is a great object. The vapor rising from the manure and the earth is condensed by the cool air passing over the surface of the shade, and hangs in drops upon the inside, and therefore the plants do not require as frequent watering. If the frames or stretchers are made large, they should be intersected with cross-bars about a foot square to support the cloth. These articles are just the thing for bringing forward flower-seeds in season for transplanting.—*Plow, Loom and Anvil*.

Transplanting Shrubs.

IN transplanting shrubs, as well as very many small trees, a common error is to place them too deep in the earth. This has arisen from the fact, that receiving more moisture,

they often succeed best in the first summer, at the expense, however, of their subsequently healthy growth. It is much better to plant shallow, imparting the necessary moisture by means of a deep mellow soil beneath, and by mulching above. The material for the latter may be short litter, manure, moss, spent tan, inverted turf, or leaves and leaf mold. A raised surface, consisting of these materials to the height of six inches, will occasion no injury whatever for a year or two, and admirably equalize the moisture of the soil. Manure used in this way operates beneficially, not only in preserving the moisture, but increasing the fertility by the liquid manure carried down in solution by rains, especially if applied in autumn or winter. The contrast between the hard and baked surface, too often witnessed when the ground is left bare, and the moist and softened earth beneath a coat of manure or litter, can be only sufficiently understood by actual experiment. Its advantages were strikingly exemplified a year or two since in planting out a bed of strawberries in the middle of an excessively dry summer. The roots, after being fixed by water in transplanting, were protected from a drouth by a coat of manure three inches thick, and, although they were watered but once, not a plant perished.

Staking may, in some instances, be necessary to prevent awaying by the wind, or a one sided growth, where there are imperfect or unequal roots. But usually, if the shrub is furnished with good roots, and if care is taken while the earth is shoveled in, to spread them all out like the arms of an umbrella, they will serve to brace it evenly, and prevent a one-sided growth. Fixing by water, as it is termed is often sufficient alone, to preclude the necessity of staking. It is most conveniently done by three persons—one spreading out the roots with his fingers, a second sifting in the earth, while a third settles it by pouring water from the nose of a watering pot. Although soft at first, the soil in a few hours dries and hardens sufficient to hold firmly the newly set roots. An additional stiffening, if needed, may be given, by encircling the stem with a small temporary mound of earth.

In transplanting roses, and some other small shrubs, sufficient pruning of the top is rarely given. Climbing roses, and those generally which throw up rapid and vigorous shoots, will make a better growth by the autumn, if cut down to a few good buds when set out,

than by leaving a long portion of stem and branches, which, indeed, not unfrequently draw so hard upon the roots as to cause the death of the plant. On the other hand, we have seen shrubs transplanted in wet weather with entire success, after having grown six inches, by taking up full roots, and drenching the soil well with water, at the same time very freely shortening back the roots, and lopping most of the leaves.—*Albany Cultiva.*

Pomology.

THE PLUM AND ITS ENEMY.

THIS esteemed fruit, so rare in our markets, so abundant at the East, seems to be almost abandoned here, on account of the difficulties attending the maturing of the fruit, difficulties which I think are greatly magnified, and which must yield to a determination to succeed. The time required to grow the tree for market, the small demand, and generally bad results when planted, deter the nurseryman from its cultivation, and compel him to devote his time to the cultivation of more profitable fruits. Thus, we see the finest peach, apple, and cherry trees exposed for sale, whilst the few plum trees that do make their appearance, are very unpromising in their aspect.

To raise fine thrifty seedlings for budding or grafting requires a very rich and loose soil. Nurserymen should manure the bed intended for planting plum-pits, at least twice a year thoroughly for two years, cultivating with the spade and planting vegetables, and if not found to be then sufficiently loose and rich, it were better to give another year's dressing. The effect of this will be to produce fine, thrifty stocks of rapid growth and early maturity. Mulching with long straw is also a great assistant, prolonging the season's growth, and keeping the bark loose until good ripe buds can be obtained, otherwise the growth often stops by the middle of June, when other trees are under full headway. Stocks thus formed can be budded with two buds at the proper height for form-

ing a top, thus making a tree fit for market in one season from the budding.

I have always preferred to insert a twig of four or five eyes, as plum buds are hard to obtain from bearing trees, whilst twigs are abundant, only the terminal twigs should be used, as others, cut at the end, would be sure to dry up.

No fruit is more suitable for city cultivation than the Plum; it is less exposed to the Curculio than in the country, and is capable of enduring much rough treatment. The best and surest remedy against the depredations of this insect, is the removal and destruction of all fallen fruit. The next best is the removal of the top soil to the depth of a few inches from under the tree, in the spring, before blossoming time; and the next is to hoe up the ground under the tree, applying a good dressing of ashes, salt, or lime, or any similar substance, destructive of insect life, both before and after this operation. Poultry are also very successful operators, as the Curculio generally goes but little below the surface.

There are many conflicting remedies put forth as preventives against this insect, all having been tried and found to be "*just the thing*," still the fruit remains as scarce as ever, few being able to make the discoveries of others bear the test of a second trial, successfully. In the foremost rank stand the advocate of pavements, it being claimed that the instinct of the insect teaches it to avoid

paved trees, on account of the difficulty of the larva finding a lodgment. Now, I hold that this is not where the advantage lies, but that the fruit, falling on pavements, is not allowed to accumulate, but is swept off and the larva with it. That the insect will not breed in plum trees growing in pavements, is absurd, as the larva will soon traverse a pavement and get into open ground, and further it is not compelled to go into winter quarters under a fruit tree, but so long as the plum it is feeding on is not destroyed, it stands in no fear of perishing. The partial success is not in the pavement, but in the removal of the fallen fruit. My experience is adverse to pavements, for though the Curculio is thus in part removed, the tree evidently suffers, unless the roots can extend themselves beyond the pavement, and thus obtain nourishment from soil exposed to the kindly influences of sun and air. We have often been obliged to prop up trees loaded to breaking, planted in open ground, whilst paved trees have grown puny and sickly, and finally died. Of course, there are exceptions, which only a proper examination of the individual case can explain.

Some writers delight in describing the Curculio as a prodigy of acuteness, baffling the combined sagacity of the whole Horticultural fraternity; in fact, a perfect *reynard subtil* of a little "Turk." Now, the cause of our bad success lies not in the cunning of the insect, but in our own individual indolence. Every punctured plum we leave under our trees may cost us fifty the next season. Removing without mashing, only changes the field of operation. Thus, running streams remove the falling plums, when inclined over them, but do not destroy the insect, as it is sooner or later cast on shore, and undergoes its transformations. One circumstance connected with the Curculio, I have never seen noticed; it is undoubtedly a *Noctua*, or

night insect; this accounts for its inertness after sun rise, and its disinclination to use its wings. I have some twenty in sand at present, and shall know in the spring to which class they belong.

If *Noctua*, the advocates of pounding and shaking may as well "hang up their fiddles," as the few they catch on their sheets, may be but a small remnant of the depredators of the foregoing night. I would advise no one to plant a plum orchard adjoining a peach or apple orchard, as the Curculio are there propagated in such numbers that it is almost hopeless to contend against them. Let any one go under a bearing peach tree in June, and cut open the fallen fruit, he will find nine-tenths to be wormy.

To the lovers of plums I would say, plant in your yards, in your gardens, on your farms, not only solitary trees, but by fifties, and let all falling plums be gathered, and if too much trouble to crush them, remove them into the street where they will be destroyed, and we shall soon have an abundant supply in our markets. C. G. SIEWERS.

Cincinnati.

A Talk about Apples.

Carolina June.—This apple appears to have been brought from North Carolina to Indiana by the Quakers under the name of *Red June*, and hence called there Carolina Red June, and the latter name in Illinois has become abbreviated to Carolina June, while in Missouri and other parts of the South, it is known by the original name of *Red June*.

Mr. Phoenix in the Sept. No. states that he has been assured by a southern friend that this apple is some two weeks later than the Early Harvest, and inferior in quality.

The Red June, though an excellent apple, is hardly equal in quality to the Early Harvest, and is later in ripening. Yet it comes into bearing very young and produces bountifully, while the Early Harvest with us is a poor bearer until the tree has attained age.

I regard the Red June as decidedly the

most valuable, at least as a marked variety; it is very beautiful, being generally a fine red deepening into crimson in the sun.

The Dyer and Pomme Royal, as Mr. Phoenix supposes, are synonymous—and will some pomologist inform us whether in fact, the *Dyer* and *White Seek-no-Further* are distinct varieties.

I observe in the Western Horticultural Review the Editor inquires if the *Red Canada* is the same as the *Ox Eye* of Cincinnati. I think not, Mr. Review; what we received from Cincinnati under the name of *Ox Eye*, is the true old eastern *Vandervere*. The same variety is also cultivated in western nurseries under the names of *Wine Apple*, *Flushing Spitzenberg*, *Ortley Pippin*, *Ladies Favorite*, and *Newtown Spitzenberg*, and by the latter name more generally known. And another, about third rate apple that somewhat resembles it, is cultivated for the *Vandervere*—*Prairie Farmer*.

✂ I thank Friend McWHORTER for pointing out a printer's error in page 464 of Vol. I, the *remark* should have been in the next paragraph.—ED. REVIEW.

Analysis of the Apple.

AN interesting paper on the analysis of the fruit of the apple, by Dr. Salisbury, furnishes some facts worthy of notice. Owing to the lateness of the season (in spring) before the analysis was commenced, the following sorts only were examined, viz: *Swaar*, *Kilham Hill*, *Rhode Island Greening*, *English Russet*, *Roxbury Russet*, and *Talman Sweeting*. From the numerous tables of results the following facts are drawn:

The *English Russet* contains less water and more dry matter than many of the other sorts. This is doubtless the reason why this variety is so hard to freeze. The *Talman Sweeting* contains more, the *Greening* still more, and the *Kilham Hill* most of all; ranging in all of these from 78 to 86 per cent. A fresh potato contains about as much water as the *Russet*. These results show the reason that apples when manufactured into cider, produce nearly their own bulk of juice, a fact which has often puzzled many who merely regarded the solid nature of the fruit.

A striking difference in the composition of the apple and potato is the entire absence of starch in the former, while in the latter it constitutes about one-half of

the solid part. The apple, according to this analysis, is rather superior to the potato in the fat producing qualities, and which accords with the experience of some accurate farmers. The apple contains about twice as much of the compounds of nitrogen as the potato.

The *Russets* were found to contain a larger portion of tannic and gallic acids than other sorts. These acids impart astringency, and are indicated by the black color given to a knife of iron or steel used in cutting this fruit. The apple is rich in phosphoric and sulphuric acids and potash and soda. Hence we may infer that bone-dust, ashes, salt, and plaster, would be likely to prove useful as portions of the manure applied to a bearing tree, in addition to what is already contained in yard manure.

Transactions N. Y. Ag. Society.

Grafting.

THERE is, in the neighborhood of Hamburg, an apple tree, which excites the astonishment of the curious. It bears two hundred and fifty-six different kinds of apples. It will bear three hundred, and the grafts have not yet all taken. The proprietor of the tree, which is perhaps the most singular in the world, has affixed a ticket to each branch, to indicate the kind of its fruit. This ingenious mode of grafting would not have suited the *Minorquins*, who were pious even in their agriculture. The English had taught them the use of grafting their trees; but when the island was restored to Spain, they left off saying, "God Almighty knew best how trees ought to grow."

FRUIT TREES BY THE ROADSIDE.—The practice of setting out fruit trees by the roadside can not be too highly recommended. In many parts of Europe this practice is general, and the fatigued traveler acknowledges the well-timed hospitality thus afforded him.—The excuse is often made that the fruit will be stolen; but, if the practice were general, the amount of fruit taken by wayfarers would only be what common hospitality would grant; and in Germany every third tree, by custom, may be *taboo'd*, (the owner of the adjoining farm ties a piece of rag to one of the lower limbs of the tree, and no traveler will touch it.) Travelers inform us that no reward will

tempt a German stage driver to regale his passengers from a marked tree. The amount of fertilizing material constantly wasted upon roads would be available by such a practice, and nothing but extreme selfishness will prevent the use of these materials for public benefit. Many of the large sort of fruit trees are highly ornamental and afford fine shade, while the use of forest trees alone for shade, like the display of costly mansions, only excite the poor to envy, without adding materially to their comfort or health.

Working Farmer.

Six Reasons for Planting an Orchard.

1. Would you leave an inheritance to your children? Plant an orchard. No other investment of money and labor will in the long run, pay so well.

2. Would you make home pleasant—the abode of the social virtues? Plant an orchard. Nothing better promotes among neighbors a feeling of kindness and good will toward each other than a treat of good fruit, often repeated.

3. Would you remove from your children the strongest temptation to steal? Plant an orchard. If children can not obtain fruit at home, they are very apt to steal it; and when they have learned to steal fruit they are in a fair way to steal horses.

4. Would you cultivate a constant feeling of thankfulness towards the great Giver of all good? Plant an orchard. By having constantly before you one of the greatest blessings given to man, you must be hardened indeed if you are not influenced by a spirit of humanity and thankfulness.

5. Would you have your children love their home, respect their parents when living, and venerate their memory when dead—in all their wanderings look back upon the home of their youth as a sacred spot—an oasis in the great wilderness of the world? Then plant an orchard.

6. In short, if you wish to avail yourself of the blessings of a bountiful Providence which are within your reach, you must plant an orchard. And, when you do it, see that you plant good fruit. Do not plant crab apple trees, nor wild plums, nor Indian peaches. The best are the cheapest.

EDSON HARKNESS.

Exchange.

DWARF FRUIT TREES.

THERE are still many disbelievers in the feasibility of this plan of growing fruit. Its advantages are that a person who occupies a very limited space may gratify his taste for cultivating a great many varieties upon the same surface that would be entirely shaded by a few trees in the common standard form, and at the same time to have the fruit always under his eye and control from the attacks of frost, insects and birds.

It should not be supposed that an acre in dwarf pears will produce as many bushels of fruit as if covered with majestic old trees, but it will yield a great many, as the trees may be set closely, and besides, the dwarfed trees are more precocious, and, in some instances at least, the fruit is undoubtedly finer than if grown upon free stocks.

A good many pages of the Review have been occupied with this subject during the last eighteen months—but the following extracts from Mr. BARRY the able Horticultural Editor of the Genessee Farmer, are presented with a guarantee from personal observations, that his statements are correct:

A FEW years ago there was scarcely anything known about dwarf fruit trees in this country, but of late they have attracted considerable attention and their character has become somewhat understood; but there are a multitude of persons who have very faint and incorrect ideas on the subject, and therefore although it may appear to the better informed class of cultivators a very superfluous undertaking at this time of the day, we are compelled to offer a somewhat minute explanation in justice to many whose claims we are bound to regard.

A dwarf tree, then, is a tree which by a certain mode of propagation and culture is reduced far below the natural dimensions: for instance the apple, which if budded or grafted on a common apple stock will make a tree twenty, or thirty, or forty feet high, and as much in diameter, covering perhaps two or three hundred square feet of ground, if budded or grafted on a Paradise stock

(which is a dwarf species of the apple attaining only three or four feet in height), will never exceed four or five feet in height and as much in diameter, occupying little more ground than a gooseberry bush. A dwarf pear is a pear formed by budding on a quince. Thus a pear which, if budded or grafted on a common pear seedling, will attain thirty or forty feet in height with a corresponding diameter, when it is budded or grafted on a quince or thorn will not exceed twelve or fifteen feet, and may even be reduced to three or four feet by working on a *mespilus*, a *coloneaster*, or some very small growing species of the pear family, or "alliance." So it is with other fruits, and the grand objects of dwarfing are—

First. To obtain small trees, adapted to small gardens, enabling the proprietors to enjoy a greater variety than they could otherwise grow.

Second. To obtain trees that will correspond in appearance with the enclosure in which they are planted.

Third. To obtain trees that will bear early, for dwarfing begets precociousness; and,

Fourth. To obtain trees that are low, easy of access in all parts, easily protected where protection is necessary, and not exposed to winds that would be likely to blow off the fruit or otherwise injure them.

These are the ordinary objects in view in dwarfing trees. But many suppose that a dwarf tree must, as a matter of course, produce dwarf or proportionally small fruit. This is a great error, but one into which the inexperienced very naturally fall. Dwarf trees, instead of producing small fruits, or those below the natural size of the variety, very often produce them larger. A specimen of the Fall Pippin, produced in the garden of Aaron Erickson Esq., of Rochester, measured sixteen inches in circumference, and weighed twenty-six and one-half ounces.—We cut this prodigious specimen and found it sound and good to the core, and of very fair quality. There grew on the same tree another weighing twenty-five ounces, and two others nearly as large. The tree that produced these monsters is not over three feet high, and this will appear to those not accustomed to the culture of dwarf trees no less remarkable than the size of the apples. We think Mr. E. may say that he has produced the largest apple on record on the

smallest tree. In all our experience we have seen none, nor in our reading have we seen any account of such large apples. The trees are some seven years planted, and are about ten years old. Mr. Erickson has also produced some of the largest and most beautiful specimens of the Alexander apple that we have ever seen, on dwarf trees too. The crop on all his dwarf apple trees the past season has been remarkably fine, although on standard trees generally it has been below the usual average. This specimen was at least one-third larger than the average product of standard trees. We have had the past season Red Astracans on a three year old dwarf tree about two feet high, nearly twice the usual size of fruit on standard trees, and a little standard four years old of Canada Reinette, four extraordinary specimens, the largest one measuring more than fourteen inches in circumference. Nothing in all our grounds in the way of fruits, excited so much wonder as this, from the last of August until the 1st of November. The small size of the tree and the prodigious size of the fruit induced many to doubt the reality, supposing that some deception had been practiced. As a general thing, where a variety succeeds on the Paradise, the fruit will be larger than on the free or common stock. So it is with pears—The largest specimens of Bartlett, Louise Bonne de Jersey, Duchesse d'Angouleme and White Doyenné, we have ever seen, were grown upon dwarf trees.—The idea, therefore, that a dwarf tree must produce small fruit, is just the reverse of the fact. At another time we may offer some remarks on the cause of this.

In regard to stocks, there is one point on which even many intelligent cultivators are not well informed, and that is the necessity of the stock and scion being of the same genera, or alliance at least. Thus, the botanical order Pomaceæ, or Appleworts, as Lindley renders it, in his Vegetable Kingdom, embraces the apple (*Pyrus malus*); the pear (*Pyrus communis*); the Siberian Crab (*Pyrus baccatus*); the quince (*Cydonia*); the Medlar (*Mespilus*); the Mountain Ash (*Pyrus aucuparia*); the Thorns (*Crataegus*); the *Amelanchiers*, of which our native Shadblow is one; *Pholinia* the *Coloneaster*, etc. These have all strongly marked natural affinities, and may, with more or less success, be budded or grafted upon each

other. But the more nearly they are related—that is, the greater the congeniality in their natures, the more successful will be the union; thus, the pear will grow upon the apple, but much better upon either the quince, thorn, or mountain ash. But, if we should attempt to graft one of the species belonging to this order of appleworks (*po-maceæ*), upon another belonging to the order *drupaceæ* or “almondworks,” we should be utterly unsuccessful, for these two have strongly marked botanical differences, and little or no congeniality of nature. We can never, therefore, graft quinces, pears, or apples upon cherries, plums, or peaches.

The order *Drupaceæ* or almondwort, alluded to, embraces all the species of plum, cherry, peach, apricot and almond. These have all certain prominent botanical similarities and affinities, and may all be worked upon each other with success proportionate to the strength of the affinity; hence the peach, apricot, almond, and plum in general grow upon one another perfectly well, but none of them can be worked to any practical advantage upon the cherry. The genus *cerasus* (the cherry) contains many species, differing greatly in appearance; for instance, the Mahaleb and Mazzard are as distinct in general appearance of foliage and habit as an oak and a willow, yet they grow well one upon the other, because of a congenial nature.

We can not at this time follow up these points further, but we have drawn attention to them, and will add that every one who aims at being an intelligent cultivator should not fail to give them attentive consideration.

Many people who have never seen dwarf trees, but order them from nurseries are quite disappointed when they arrive. A tree two, three, or four feet high, seems small to those who have all their lives been accustomed to large trees. They fear “they will never come to anything.” We have seen people in search of dwarf trees, and yet ask the tallest tree in a row. Dwarf apples are of course very small when transplanted. A yearling will be from one to two feet, and at two years very little taller, but branched. Such diminutive things to the inexperienced are too small. One man says, “the dwarf apples are sprouts—not what I imagined them at all.” There is a much greater lack of knowledge on this subject than there ought to be, when books and papers are so abundant and cheap.

Gooseberries.

FRIEND WARDER—Permit me as a beginner in Horticulture, to give my mite of experience, and make a few inquiries in respect to the proper culture of the English gooseberry.

Two years ago I transplanted a lot of roots and cuttings in a very rich soil, on my farm more for the purpose of increasing my stock of bushes than for the fruit. The consequence was a most abundant growth of wood, and early next season an equally good prospect of fruit. But by the time it attained one-fourth maturity, a rust or mildew appeared, which so covered the fruit as to stop its growth and entirely prevent its maturing.

In the fall I divided and subdivided my bushes, and transplanted on high ground, in rows eight by ten feet, and as I had seen in some paper that mulching with straw through the winter, would prevent mildew, I gave them a coat with a little stable compost, and in the spring removed the straw and cultivated as usual. The fruit being killed by frost last year prevented me seeing the result. But I am fully persuaded that had it been a fruit season, they would have mildewed as before, as *many* of the branches were so completely coated as to stop their growth, and almost entirely destroy the bush. Tell me the cause of my failure, and what will prove a certain remedy, and thou wilt comply with the desire of thy friend,

B. S.

Forest Home, Second mo., 1852.

N. B. My lawn of some three acres, (my dwelling occupying the center), is thickly set over with native forest trees, mostly rock or sugar maple, I wish to intersperse it with ever greens of various kinds, and I should like a word as to the soil, best mode of planting, etc., to produce a rapid growth; the natural soil is a rather stiff clay. B. S.

REMARKS.—My friend has misapprehended the directions as to mulching the gooseberry; the season of all others when this process is supposed to be most valuable, is during our

hot and dry months when the covering of straw, boards, tan or other rubbish serves to retain the moisture within the soil and to prevent its being parched up by the burning sun. Mulching with salt hay from the marine marshes has been highly commended for gooseberries by some eastern writers. We have no salt hay, but could make a tolerable imitation if required, and in its absence can try some other substance for mulching and especially should retain this during the whole season. Dr. Hildreth recommends tan bark, see page 315.

I do not know of any trials that have been fairly made with this treatment; but should hope for a good result—the evil complained of is a very general one, and few persons have succeeded with fine sorts of gooseberry outside of the city; success *here* is attributed to the favorable influence of coal smoke, but it will be recollected that the finest crops were obtained, quite free from mildew more than twenty years ago, at a time when the consumption of coal was limited to a few small foundries and machine shops.

The gooseberry delights in a moist soil and climate and some success has been obtained by placing them in rich, damp earth, on the northern side of a building or high fence, so that they may be somewhat shaded from the direct rays of the sun. A liberal sprinkling with flowers of sulphur, or syringing with sulphur and water, is frequently practiced in the greenhouses and graperies for checking the mildew that appears in such places, this treatment has been also recommended for the gooseberry mildew. The operation of the sulphur is not understood by those whom I have consulted; will not some kind reader present an explanation of its *modus operandi*?

The other queries would involve a long story which must be postponed for the present, as space and time are both wanting.

Strawberry Culture.

Cincinnati, March 16, 1852.

DR. WARDER—This is truly an age of miracles. There are many of our intelligent citizens, who are converts to Mesmerism, and Spiritual Rappings, but I fear that our strawberry gardeners who bring in from fifty to one hundred bushels each, per day, will not readily believe in the new *southern doctrine* of raising the “largest and finest of fruit, without leaves, and increasing the size of the fruit and its quality thereby, converting the leaves into fruit, and having fruit from eight to ten months in the year.” It seems that “a poor sandy soil, is necessary to accomplish these objects.” We have been so far in the back ground, that we deem a rich, stiff soil, with a stiff clay beneath, as the best for producing large fruit. The largest I have ever seen at our Horticultural room, was a basket presented by Mr. Jackson, raised on the kind of soil named. The fruit measured from five to five and three-eighths inches. His vines were of vigorous growth, and covered with leaves of large size. What would have been the size of his fruit, and what the quantity if this enormous crop of large leaves had been added to the berries, to increase their number and size? His was the Hovey’s seedling, the same variety cultivated in the south. We are so far behind the age, that we deem vigorous plants, and a large number of healthy leaves necessary to produce large and fine flavored fruit.

Our southern horticulturists do not give the measure of their berries. I should be gratified if you can inform us. If we are to believe the word of a New York Agricultural editor, he “saw a bed of the fruit without vines.” Do not misunderstand me—I do not intend to express any doubt of the truth of your New York brother’s declaration. For I have as much faith in the declaration

of fruit without vines, as in the assertion of your southern brother, of producing in "a very poor sandy soil, a continual succession of the finest strawberries grown upon the bosom of our mother earth, and of dwarfing the vines, without affecting the size and quality of the fruit." Favor us with your views.

A BACKWOODSMAN.

A VALUED FRIEND who will not be able to screen himself from recognition by his modestly assumed *incognito*, has directed my attention to this wonderful story of continuous bearing of the strawberry, and in the south too, where our friends so often complain that they can not succeed with this delicious *alpine* fruit, owing to the incongeniality of climate, as was very naturally supposed.

It is a nice matter for an editor to be sufficiently cautious on the one hand, and sufficiently credulous on the other, and this little piece of information had run the risk of being classified with the wondrous accounts of the new "French Botanist" who is said to be able to unfold any bud in a few moments by applying certain chemical stimuli.

But it is due to Mr. Peabody, the agreeable editor of the "*Soil of the South*," and also to his voucher the venerable "Uncle Solon," of the "*Plow*," that the readers of the Review should have an opportunity of hearing the former tell his own story, which is here quoted.

It will appear that Mr. P., beside other evidences of good sense and correct principles, has a just regard for the value of *mulching*, and that he also endeavors to meet the difficulties of an arid climate and an arenaceous soil, by a free supply of water. Irrigation is probably an essential element of his success—a matter well understood by those who grow specimens, even in the humid

climate of England, where saucers of water are placed beneath the gooseberries intended for exhibition.

It is much to be regretted that we have not been furnished with the measurements of some of these "finest strawberries;" of this deficit however, we of Cincinnati have no right to complain, a similar omission having been made in the strawberry report of last year.

It is not possible to reconcile the idea of a healthy and *productive* plant destitute of leaves with all our observations based upon theory, well supported by facts, which make it apparent that these organs exercise an important rôle of the vegetable economy, in elaborating the sap for the nourishment of the fruit as well as for the support of the whole plant and roots.

Would that I could accept the banter of an invitation contained in this extract:—

We had thought our strawberry culture had been explained so that any one that *believed*, might learn. If any of our subscribers, will visit our strawberry *patch* in March, April, June, July, or August, we will give them such ocular proof, that they shall not doubt the capacity of a hot climate and *very poor soil* to produce a constant succession of the finest strawberries grown upon the bosom of our mother earth.

We have learned our strawberry culture from long experience, and in our experiments we considered the climate and the nature of the plant. We found a mammoth fruit, and our object was to dwarf the vine, without affecting the size or quality of fruit, for we had learned that all plants require different kinds of food in perfecting their stems, stalks and fruit. We give the strawberry all it wants to perfect its fruit, and retain the luxuriant habit of the vine, by a cold and simple diet, thus enabling it to brave the heat of our summer suns, and to help the fruit stalks, instead of putting all its capital on its back in the way of clothing.

We will not pretend to say that all strawberry plants can be cultivated in this way; we believe they must go through a thorough

acclimation, and be gradually disciplined to their humble fare. All fruit cultivators are aware that an over luxuriant tree seldom produces much fruit; hence root pruning has been resorted to, to check the too rapid growth of wood and it invariably forms fruit where none or little grew before. It is on this principle that we cultivate the strawberry.

The soil that seems best suited to the growth of the fruit is a sandy loam. The natural location of the bed has much to do with its productiveness; as moisture is one of the greatest elements in perfecting the fruit, the bed should be as near a stream of water as possible. New land is preferable to old—we care not how rich the old may be, nor how poor the new may be. Before planting it should be mellowed deeply. The vines may be planted any time from September to April, (we have moved them in full fruit). We plant six or eight rows of Hovey's Seedling, which is a pistillate, to one of the Large Early Scarlet, which is a staminate or hermaphrodite; both bloom and fruit together; the rows two feet apart and the vines some eighteen inches apart in the rows.

Strawberry vines will live planted in almost any way, but if fruit be an object the first season, the roots should be put into the ground just as they were taken from it. The vines will make from runners the first season, enough to stock the ground. In the fall go over the ground with the hoe and thin out to some ten or twelve inches, leaving the vines to decay where out up; after this is done, cover the whole earth with decomposing

leaves, scrapings of forest earth, fine mud from ditches, and any vegetable matter that will decompose soon. Before the plants bloom top dress them with ashes, leached or unleached. Keep the whole surface of the ground covered with leaves, which shades and cools the ground, and keeps the fruit clean.

As the fruit stalks appear, should the weather prove dry, give them water; as soon as the fruit sets, should the weather prove dry, give them water; as the fruit ripens, should the weather prove dry, give them water. By this treatment, another fruit stalk will have started, before the first is done, and so on through the summer. The vines will make few or no runners, during the fruiting season.

Keep down the grass and weeds with the hoe. We have tried the plow, but it let in too much sunlight. Better keep the grass smothered with leaves. Let those who wish strawberries *five weeks* in the year, trench in two feet of stable manure; but those who like them six or eight months, exclude all manures but Nature's, and change the green leaves into nice and luscious fruit. This can be done. This we do, and our readers who choose, can do the same. We doubt not there is plenty of land through the country as poor as ours. When our old friend of the *New York Plow* walked through our beds last March, he exclaimed, "well, well, this is the first bed of strawberry fruit I ever saw without vines." And it was literally true; the ground was covered with fruit, with scarcely yet an appearance of leaf. [!!!]

The Vineyard.

VINEYARD CALENDAR FOR APRIL.

Prepared by a Committee of the American Wine Growers' Association.

THE labors of March should be continued, if not already completed—though a good vinedresser will always endeavor to drive his work, and never let his several labors of each succeeding month interfere with one another, by neglecting them in their proper season.

Those who teach this punctuality and

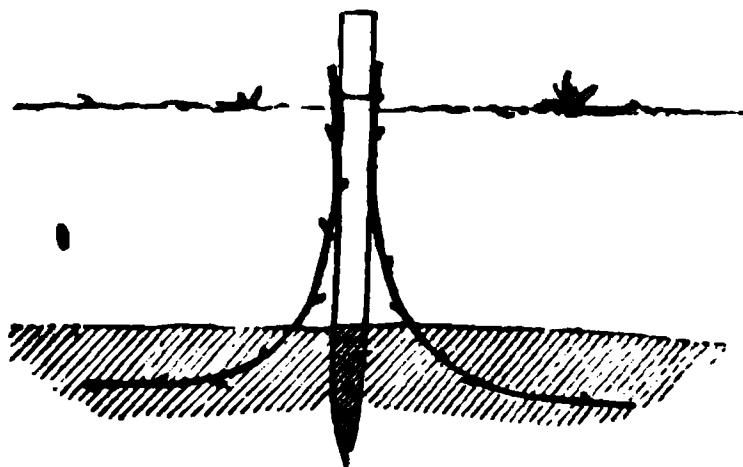
promptness, however, should see to it that they do not have to apologize for their own deficiencies—and now hasten to make up for an oversight of last month, but editor and reader must excuse it in those who profess to be but beginners in teaching.

Tying the Vines, was omitted in the last

calendar; it is an important operation, and should be performed at the end of March, or the beginning of April. After trimming, the canes are to be securely tied to the stakes, which should have been firmly driven, before the ground settles too closely. The usual method is to bring the stock against the stake, and secure it with an osier, the bow or hoop is then bent and tied where it passes the stake above, and if long enough, it should be brought back toward the stock, and there secured. Some train horizontally, whether on trellises, wires, or by simply tying the ends of the canes to the adjoining stake. It should also be observed, that a damp or wet day must be selected for this process, because the strain upon the branch, even in careful hands, will otherwise endanger the vine's breaking where it is bent, and an experienced hand will give the cane a very gentle twist as he is bending it.

Preparation of the Cuttings.—Full directions were given last month for the selection and cutting of the spare branches of the vine for this purpose; let us therefore suppose that every thing has been properly prepared, and the neat bundles of cuttings are at hand, snugly put away as directed. Two plans are recommended, to prepare them for planting—either to plunge them into a large tub of water, to stand three to five days, until the buds are ready to burst, or to dig a shallow trench in a dry place, as long and wide as necessary to contain the quantity to be planted, and there to bury the bundles, shaking in among them the moist crumbling earth, and slightly covering them with soil. Some persons advise placing them in this situation as soon as they are cut, or early in March—here they are to remain until the eyes have started, or are ready to start, when they are to be carefully exhumed, and must be protected from the air as much as possible until planted.

Planting in the Vineyard.—If you wish to begin a vineyard with cuttings, the ground should have been already thoroughly prepared by trenching or subsoil ploughing, and if the earth be sufficiently dry to work, select good cuttings of at least four joints, properly prepared, lay off the ground with lines stretched across the field, and set little stakes at the proper distances, say, for common field culture four by four feet, or three by six feet; if for trellises, six by eight feet. Make your holes ten or twelve inches large by eighteen inches deep, throw into the hole one shovelfull of good soil, place the cuttings as shown in this cut, with their tops coming



together at the center, then add some more good soil, and tread it firmly down, and fill up about two-thirds full, being even with the ground on one side next the cutting, but falling off in a slanting direction toward the south; the object of which is two-fold—to admit the air and warmth to the vicinity of the base of the cutting, and also to retain the water when it rains. Two cuttings are inserted, so as to insure one rooted plant, and they are set opposite, so that if both grow, one may be removed without disturbing the other. It may be well also to say why the cuttings are bent into the shape of an L: the roots are more apt to start out from the buds near the bend, as well as from the base of the cutting, when they are thus constrained, than if set straight.

Planting Rooted Vines is to be performed much in the same way, as to laying out the ground, which should have been properly

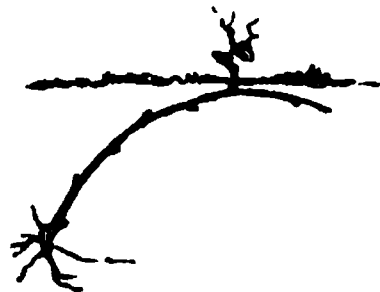
prepared, of course, and if trenched three feet deep, with the top soil placed at the bottom, so much the better. The holes should be made larger than required for cuttings, say twelve by fifteen inches; cut in the roots to four or six inches from the old wood, throw in two shovelfulls of good earth, spread out the roots well, and bring up the head of the plant at one end of the hole beside a stake, two large shovelfulls of good soil are to be thrown in and tramped closely, and then fill the hole two-thirds, as above advised.

Planting Cuttings in a Nursery.—Having selected some good garden soil, it should have been trenched, and the cuttings suitably prepared, as already directed; then with a spade, open a trench ten inches deep, extending across the bed; set the slips six inches apart, and let them lean from you, bending them as directed above, in the shape of an L; throw some good soil upon their lower ends, press it down with the foot, and fill the trench so that the top of the cutting shall be even with the surface of the soil, or if it be light, a little beneath it; then open a new trench fifteen inches distant, and proceed as before.

Some persons trench and plant the ground at the same operation, taking a rich piece of sod or clover lea, after opening a trench as usual, and having one strip dug across the bed, a line is stretched, and the stirred earth is dressed straightly by it, when the cuttings are set to the line, and the top earth is dug down upon the bottoms of the slips, pressed against them, and the next digger proceeds with the lower spit as usual in trenching ground; the line is again stretched, the earth dressed to it, and another row of cuttings set as before, until the whole is finished. The distance between the rows may be fifteen or eighteen inches.

Still another method is pursued, and promises to be very successful—it is to bury the

cuttings entirely, keeping the upper ends just beneath the soil, which should be of a light, sandy and friable character, the slips being set in an inverse position to that directed above, so that both ends may be lower than one of the upper eyes, thus:



Further observations are needed to enable us to speak with confidence as to this plan.

Grafting may be performed during this month. It is considered best not to commence too early. Some recommend waiting until the buds of the stock have begun to push out; the grafts having been kept in a cool place will not be so forward. This process is done in the vine as in other plants.—Different plans are pursued, but the general principles must be adhered to, and the idea which has been promulgated, that any kind of grafting will do for a grape-vine, (even boring a gimlet hole in the stump of the stock,) will lead to disappointment; although the union is very easy and apt to be successful, if care is taken to adapt the inner barks of the stock and of the scion to each other. If not performed at or near the ground, so that the stump and union may be protected by a little mound of earth, careful wrapping and protection from sun and wind will contribute to its success. Some use the root.

Grafting is applied to change bad vines into good varieties, such as the wild vines on a new farm; to multiply new sorts, or to exhibit the character of a new kind in the shortest possible time, for many will yield fruit the first season. Persons who have one large vine of indifferent character may produce several new plants of a better sort in

one season by grafting on the branches, and at the same time, or during the season, layering them. Some prefer always grafting into the roots.

Working the Ground is advised by some, during this month—and this period is generally selected by the Germans; others object to disturbing the soil too soon, on account of the supposed tendency to start the buds too early, and thus render them more liable to suffer from the influence of late frosts. They say also that the ground should not be stirred before it has become somewhat dried, warmed and friable; by this delay, too, one crop of weeds is destroyed in the operation, and the next is thrown back later in the season, so that the summer culture is rendered easier.

This is still chiefly performed with the heavy two pronged hoe, of Germanic origin, for which Yankee enterprise has not yet suggested an acceptable substitute; though some of the Americans fancy that a horse and plow or cultivator is quite as easy work, if not also equally efficient, or better.

At the same time that the ground is worked over with this antique instrument, (the *bidas*, rendered classical by Virgil,) the Germans continue to cut off the small roots of the vine, which are thrown out pertinaciously by the stock near the surface of the ground; as though the plant did not understand its own business better than we. This practice is, however, urged by many good vine dressers, who claim the teachings of experience, and say that no philosophical argument is needed.

Manuring should be attended to at this time, if it have not been done in autumn, which is a preferable season. Upon the propriety of this measure there is a diversity of opinion, and a lengthened discussion might be opened upon this topic, which shall not now be attempted. Upon general principles, it has been urged that reason would

dictate *feeding* the soil which is expected to yield abundantly for a long series of years, a product rich in potash; hence, *special manures* are recommended by some of the most scientific cultivators. Of this class, are the simple trimmings of the vine, which are dug into the soil; ashes thrown upon the surface, or, still better, as being more effectual, a soluble preparation of potassa, such as the soluble *silicate*, which has been successfully applied by Mr. Rehfuß.

This month's calendar has been extended beyond the limits intended; but the subjects appeared to demand a little elimination.

Racking Wines.

THIS being the season of the year when the wine may require attention, the reasons for racking and the manner of effecting it are presented:

This operation is performed to separate the wine from its ferment, in order to prevent further change, either spirituous or acetous—to separate it also from the lees, containing, beside the yeast, cream of tartar, and coloring matter which has accumulated at the bottom of the cask. This process also enables us to avoid the exposure of the surface of the wine to the influence of the air, by which it would suffer more evaporation and be liable to be covered with mold (*Kahnen*) a white cryptogamic plant which covers the wine and gives it a putrid taste.

To effect the first object, frequent racking is required, say 1st, at the end of December; 2nd, at the end of February, in March or early in April; and then again in the autumn, at the end of October; such is my treatment of the Catawba wine during the first year; after this, it is only racked in the fall. The latter object is to be attained by keeping the cask always bung-

full to exclude the air and prevent alcoholic evaporation or absorption of air, to produce putrefaction. The bung should be made of clear wood, wrapped with clean linen to insure tightness; a caution should however be had to loosen the bungs in April, when the wine is apt to undergo a fermentative change, and should the bung be too tight, so that the gases can not drive it out, the bottom of the barrel may have to yield before the pressure, and thus the wine will be lost.

In racking, the first requisite is a good *wine-green* cask, which has previously contained similar wine, it should be carefully examined to ascertain that it is quite clean and has neither a sour nor other bad smell. After the cask is thoroughly rinsed with clear, fresh water, burn a piece of brimstone paper, one by three inches large, suspended from the bung by a piece of bent wire. This is made by dipping paper into melted sulphur. Then fill the cask, but endeavor to expose the wine as little as possible to the air. Never use a new cask in this process, as the wine will acquire a bad smell and taste from the fresh wood. Neither should you think of taking a barrel that has contained Brandy, Madeira or other wine than good Catawba, as these substances always impart a taste to the wine, and thus destroy the fine flavor of our delicate product. Casks become what is called *wine-green*, or fit for old wine, after having had fermented in them sweet cider or grape must.

Empty casks may be kept in good order by being thoroughly cleaned, and after they have been left to dry for a few days, burn a piece of sulphur paper and bung them tightly, this may be repeated every three or four months. The burning sulphur produces sulphurous acid gas, which prevents putrefaction and acidulation, but they should be well rinsed before they are again used.

Especial caution is given after racking the wine to keep the cask always bung-full — this requires frequent examination, say every three or four weeks, when it should be filled up. In a cask that is not kept full, there is more evaporation, and in presence of the atmospheric air, acetous or vinegar fermentation is apt to be commenced, the white mold (Kahnen) is formed, and the wine is spoiled, never to be restored.

A great many persons believe that the racking of wine is not necessary, they say that it is thereby weakened, because the yeast and all the sedimentary matters give strength to the wine — let us examine into this. The temperature of the must during the first week of the first or quick fermentation is very much increased, the liquid from being clear, becomes turbid, owing to the separation and precipitation of the decomposed and effete ferment, the cream of tartar and other matters which are kept in continual motion by the escaping carbonic acid gas. In the second week the fermentation is moderated, the temperature is reduced; in the third week this reduction is still more observable and fermentation nearly ceases, until the temperature becomes almost the same as the surrounding air, and cold weather comes on. At the end of December the wine will be nearly clear and this is the time I recommend for the first racking. At the end of February, the weather is still colder, and more of these foreign ingredients are separated, hence this period is recommended for the second racking, the wine will then be mellow and nearly clear. In the middle of April, when the *vines* begin to push forth their buds, the *wine* ferments again, but if it have been well racked it possesses little yeast, and the fermentation will be slow, and more of the sugar will be retained in an unchanged condition, so that the wine is more palatable.

What happens on the contrary, with

wines that have not been racked? With the increasing temperature of the season, in April or May, fermentation commences, and the escaping carbonic gas stirs up all the sediment from the bottom of the cask, bringing it into contact with the wine, which retains a portion of what it had before thrown off, the yeast also, thus mixed, will decompose more sugar, and the result will be a too hard and too astringent wine, that must require years to render it again mellow.

L. REHFUSS.

Statistics of Vineyards.

IN accordance with a resolution of the Horticultural Society of Cincinnati, passed at its last session, calling on the President and Council to report on the extent of the interest at this time engaged in the wine business in the neighborhood of Cincinnati, we submit the following report:

Of the number of acres now under cultivation in vines, we are not, as yet, prepared to give an exact account, as the entire statistics of the county have not been fully made out since 1845. In that year (see report of Wine Committee) there were eighty-three vineyards, covering an area of three hundred and fifty acres. In that year alone, one hundred acres were prepared and planted, and the number of acres brought under cultivation has been steadily and rapidly increasing every year since. The great number of new vineyards commenced since 1845, some of which embrace twenty-five to thirty acres, with the annual enlargement of those previously planted, will swell the aggregate amount to not less than twelve hundred acres. From the statistics already in our possession, we can safely say that this is within the actual amount.

The labor bestowed upon this culture in the preparation of the ground, planting and dressing, and making the wine, gives em-

ployment to at least six hundred efficient laborers, at an annual cost of \$120,000, producing, when in a bearing state, in moderately favorable seasons, about 240,000 gallons of wine, estimated at about the same number of dollars. Beside the cultivators and wine-dressers, employment is also given to wood coopers, equal to the making of eight thousand barrels, estimated at \$8,000.

A considerable portion of this crop now falls into the hands of the wine coopers, and is converted into sparkling wine or champagne, thereby more than doubling its market price. The value of sparkling wine prepared in this county in 1851, as near as we can arrive at an estimate, amounts to not less than \$75,000. The dealing in these wines also forms a considerable item in the transactions of the wine merchants.

As most of those engaged in the culture of the vine have families to support, as well as others engaged in the business, it may, without exaggeration, be calculated that the wine interest in Hamilton County, affords subsistence, directly or indirectly, to at least 2,000 industrious and sober people—a drunken vine-dresser we have never met with.

S. MOSHER, *Pres. Hort. Soc.*

Cincinnati, March 15, 1852.

When this report was read before the society, some of the members expressed great surprise at the large amount of the vineyard interest—but others considered the estimate to be below the truth. Mr. Yeatman suggested that it should be put at 500,000 gallons for the aggregate annual yield, in a fair average estimate.

Mr. Longworth considered the value of sparkling wine, prepared last year, to be \$175,000, instead of the amount reported above.

Transactions.

Cincinnati Horticultural Society.

SINCE the last Report, the meetings have been sustained with considerable spirit. The members appear desirous of entertaining one another with useful discussions upon Horticultural topics, as recommended by a committee at the close of the last year. Such a course must be productive of great good, by diffusing valuable information—and such meetings can not fail to be entertaining to those who assemble. Some very interesting discussions were had upon the effects of the frost in various situations, and attempts were made to explain why some situations suffered more, and others less. The almost total destruction of the peach blossoms was reported, and some injury had been observed in the blossom buds of the pear and cherry.

The importance of an Agricultural Bureau at Washington City, was urged, and a committee to whom the subject was referred, reported very favorably, and recommended a memorial to Congress, in the name of this Society.

The President was directed to address the Legislature of Ohio, urging them to recognize Horticultural Societies, and grant them the same privileges as are allowed to Agricultural Societies, and a voice in the election of the members of the State Board of Agriculture. It is earnestly hoped that our rulers may see the propriety of granting this request.

The President and Council were directed to forward to the Legislature the statistics of the vineyards and orchards of Hamilton county. [The account of the vineyards will be found on page 336.]

The regular subject for discussion Saturday, March 21st, was *The Culture of Asparagus*, which was very interesting and may be reported in a future number. Various grafts, roots, and seeds have been distributed during the month.

Exhibited.—Esopus Spitzenberg, Eppes's Sweeting, Tulpehocken, Hunt's Russet, Swaar, Northern Spy, Pennock, Rawle's Janet, and other apples.

Members Elected.—Dr. D. Oliver and Geo. Bogen have been constituted members. It is hoped that many of our citizens will aid this Society by their countenance, and thus contribute not only directly to the advancement of the common interests of society at large, by means of the spur that is here given to the cultivation of superior fruits, vegetables, and plants of every kind, but also do their share in keeping up the state of the treasury.

The opening season will, it is hoped, be unusually attractive in its floral and pomological exhibitions upon our tables. Already great preparations are making among the cultivators for a brilliant display at the Spring Exhibition, on the 12th of May next—when, in the Horticultural Hall, will be made as rich a show as can be desired.

Columbus Horticultural Society.

FROM the amiable corresponding secretary the following information as to the organization of this flourishing society is received. It is hoped that their weekly meetings will be profitable and that the garden will prove all that their brightest anticipations have projected. I shall be happy to learn of their proceedings.—Ed.

This society was organized for the present year by electing the following officers and Committees:

President—John Miller.

1st Vice President—Lucien Buttles.

2nd do do Benj. Blake.

Treasurer—Adam Sites.

Cor. Sec.—Henry C. Noble.

Recording Sec.—Geo. B. Comstock.

Council—The President and Treasurer, *ex-officio*, and Messrs. A. E. Glenn, John Burr, and F. Stewart.

Garden Committee—Dr I. G. Jones for five years; Benj. Blake four years; Lucien Buttles three years; Robert Hume, jr., two years, and John Miller one year.

The society have rented the room over H. Cowles' store for their meetings and weekly exhibitions, and have resolved to push on the improvements of the Garden as fast as possible.

Indiana State Board of Agriculture, and Franklin County Society.

It is delightful to turn from the political arena, too often a disgusting scene, and deserving the appellation "Bear Garden," occasionally applied by some independent editor having nothing to fear and nothing to hope, and refresh ones-self by perusing the conversational discussions of some practical topics by the true lords of the soil, the intelligent agriculturists of our country; better still, to mingle with them in these conversations and heartily shake them by the hand.

Our own horticultural society is taking high ground in this respect, and the discussions must prove of great practical value to all concerned and should be an additional incentive to others to unite with the association.

Of Ohio farmers, in this part of the State at least, little can be said respecting their efforts to improve one another by this sort of interchanges; though the class in agricultural chemistry, in an adjoining county, is an honorable exception, as they have retained the services of one of the best analysts and practical teachers, during a great part of the winter. I refer to the neighborhood of New Richmond, O., and to Dr. Chas. H. Raymond.

But my intention, when commencing these remarks was not to complain of my friends, but to compliment the wisdom of our neighbors of Indiana, who, at the close of the very interesting session of their State Board of Agriculture, held at the capital last January, determined that they would have meetings every Saturday for the purpose of discussing agricultural matters. These meetings have been kept up with spirit, and it can not be doubted that the printed reports have exerted a happy influence upon the people of the State.

It may also have been emulated by others favorably situated for such meetings. The neatly printed and well filled pages of the *Brookville American* give evidence that the agriculturists of Franklin county, one of the many "Garden Spots" of our glorious country, have been holding monthly meetings of a similar character, and, if any judgment can be formed from the excellent reports, made by Mr. Geo. A. Chase, to that paper, these discussions upon draining, corn growing, hedging, and other kindred topics, must be of great value to the participants and auditors: they also evince a great degree of both practical and scientific knowledge among those who are called out.

The meetings are generally held upon the first Saturday of the month, but that for April is advertised for the second Saturday, the 10th, and as Brookville is quite accessible and situated in the lovely valley of the White Water, why may not some of the neighbors look in and listen and learn? The place of meeting

will be BLOOMING GROVE. When will the Wayne county folks begin to move?

The executive committee have advertised for proposals, but it is not yet known which of the many thriving towns will secure the honor of the first Indiana State Fair, to be held next October.

The American Wine Growers' Association

Held their regular meeting on Thursday afternoon, March 4th, 1852, on a call of the committee appointed.

The President reported that he was progressing with the matter of statistics which had been referred to him.

The address of the President, made at the last regular meeting, being taken up, the Society considered his first suggestion, as to the modes of pruning and trimming the vines. A free discussion ensued, when several different methods were suggested; among them the plan understood in grape houses as the "spur pruning;" and the different methods pursued in Europe were detailed by Mr Yeatman, as he had seen them practiced in different parts of that continent.

Mr. Reh fuss suggested, that he had allowed his foreign varieties to grow freely, and that, as the Catawba was very rampant, therefore, it, too, should be allowed to grow; and he urged that all leaves and laterals should be left, except on the cane.

After inquiry as to the methods of training in practice here, it was suggested that each member should endeavor to try different plans, and report from time to time upon the success attending each.

Mr. Yeatman stated that he was planting in various ways, close and wide.

Mr. Reh fuss observed that he had found the Catawba grape, especially during the last dry season, had always ripened best where it was well furnished with leaves.

Mr. Reh fuss read a very interesting communication upon the subject of *racking wines*, which was referred to the Secretary for publication; also, the "Vineyard Calendar" of the next month; both to appear in the W. H. Review. See pages 331. 334.

The subject of special manures was considered, and the necessity of supplying potash, in some form, was urged, as an essential element in cultivating the vine, particularly in soils that do not abound in this substance. Mr. Kelly observed that in old nurseries, ashes had been found invaluable as a manure, to replace the potash removed by taking off successive crops of trees. He thought this might furnish a useful hint for our vineyard culture, where so much is abstracted.

Mr. Reh fuss's application of a soluble silicate of potassa was mentioned, and as a convincing proof, the members were reminded of the two samples of wine they had tested at a previous meeting, which showed the effects of this manure.

A suggestion was made that a committee be appointed to prepare a memorial to the Legislature, asking for the establishment of a Practical School of Agriculture, with suitable conductors and professors, to give pupils a thorough education. Referred to Messrs. Reh fuss, Graham, Buchanan, Hatch, and Yeatman.

Our fellow citizens are requested to aid us in this very important measure.

Miscellaneous.

The Poet's Narcissus.

DR. WARDER—A remark at page 219 of the current volume of the Review, on the best locality for the Poet's Narcissus, induced me to examine Loudon's Encyclopedia of Plants, where I found "common garden earth" recommended. Nothing is said about either *shade* or *moisture*; neither has my experience of more than twenty years in the culture of this fine plant, discovered that the least attention to either was necessary. It comes into bloom before the dry season approaches; like most other bulbs, its leaves become sere soon after its growth is completed, and it passes the heats of summer in a dormant state.

Of the genus *Narcissus*, there are about sixty species; and Loudon says, even the least perfumed produce dangerous effects on the nerves. On this account, they ought to be excluded from vases of cut flowers,

especially if they are to remain in a close room, or one not thoroughly ventilated.—More than half the species have yellow flowers; and these I have always had the least inclination to smell—the white flowered, (consisting of more than twenty species,) appearing the most delicate.

All the species (including daffodils and jonquils) are marked *hardy*, in England, and most of them are probably so in Western New York; but *N. floribundus*, and *N. tazetta*, with all its varieties, are safer in winter under an inverted sod.

D. T.

Cayuga county, N. Y.

Greatfield, Third mo. 12, 1852

DR. WARDER—Dear Friend, I observe that my caption of *Cane Brake* has been changed to "Cane Plant" in the Review, and doubtless it was done with the best in-

tention, but still I think it was no improvement. In the first place, there are several plants known by the name of *cane*, and this alteration leaves the meaning indefinite—while by *cane brake*, the *miegia* or *arundinaria* is always understood.

If it be objected that *cane brake* and *meadow* are analogous terms, allow me to say that *meadows* consist of many different plants, but *cane brakes* of only one sort; and in many cases the whole brake must consist of a single plant. Besides in Loudon's Encyclopedia of plants, this plant is called the *cane brake*. Favored by time and situation, it always forms thickets or brakes.

If any discussion in the Review should induce me to think that I could put in a few words to the advantage of thy readers, I shall feel the disposition to do so.

Very respectfully and sincerely thy friend,
DAVID THOMAS.

REMARK.—My venerable friend is known to be high botanical authority, but even his reference to Loudon will not satisfy us, nor induce us to change our *vernacular*. In the whole west and south *cane* refers to the plant, and *cane brake* to the collection, more or less extended. We are also warranted in this use of the word by Webster and Ellicot. I therefore hope he will excuse the necessary alteration directed by the Editor.

Seedling Strawberries, and Seedling Editors.

MY DEAR DOCTOR—A friend in Boston has forwarded to me, for inspection and comment, an article in the *Magazine of Horticulture*, written, as it would seem, by the Editor, C. M. Hovey, the Seedling man.

The article is not worthy of much space in your columns; because the writer's opinions upon a matter, in which he is so nearly in-

terested, are of no value whatever. Such as it is, however, let us read it:

Pomological Gossip.

McAVOY'S SUPERIOR STRAWBERRY.—In our last volume, (XVII, p. 360,) we noticed this new strawberry, and the Report of the Committee of the Cincinnati Horticultural Society, awarding the prize of \$100 to Mr. McAvoy for its production; and, as the committee made no remark in relation to its qualities, by which it could be compared with other known kinds of merit, we made inquiry at that time, hoping that the committee, or some of our Cincinnati friends, would inform us of the *size* or *weight* of the berries. Mr. Kelly, nurseryman of that city, in a note accompanying a few plants, which we purchased to give the variety a *fair trial*, states that 'there is no mistake about the merits of this strawberry. I can not remember having seen any of the fruit from them of such great size and weight, as those stated to have been obtained from your seedling. The *general* size of the berries, and the *quantity* of the crop, as well as its *quality*, are the questions here.'

Beyond this we have learned nothing definite in regard to it, until the last *Rural New Yorker* came to hand, in which we find a letter from H. P. Norton, of Brockport, N. Y., which states *just what we supposed to be the truth* in regard to the *alleged merits of this new seedling*. Mr. Norton's remarks are as follow:—

"I saw the 'Queen City,' Cincinnati, and have a word or two to say of what I learned there. One fact I became convinced of is, that they of that city do not produce so large strawberries as we raise in Monroe [county]. I made the acquaintance of Mr. McAvoy, in honor of whom the new prize variety was baptized 'McAvoy's Superior,' a plain sensible Hibernian, from whom I obtained plants, and who exhibited what he declared to be an accurate colored representation of the fruit of this variety. I inquired, 'How large were the largest you raised?'

'That one,' pointing to the picture, 'was the largest.'

'Well, how much did it measure?'

'Oh! four and a half inches.'

'Are they really larger than *Hovey's* grow with you?'

'Oh, yes.'

'But we, in New York, have *Hovey's* of larger size than that. I raised them this year considerably larger.'

'I dare say. I don't doubt they grow larger in your state than here. Your season is longer, and the berries have more time to grow. Our season is hot and short; and they come to maturity very quick, and don't get such size.'

It may be, the 'Superior' will, with us, having more time to grow, excel *Hovey's* in magnitude, as it does in Cincinnati, where it originated. Who knows?"

Mr. Norton's question is certainly significant. Another season will reveal "who knows."

There are two things assumed here, which are by no means generally granted; how-

ever much it may please an egotistical editor to consider them so. The first is, that strawberries are to be valued according to their size; and the second, that Hovey's seedling is the acknowledged champion of the East.

If, sir, size be the criterion, the Cattillac pear is superior to the Seckel; and the Ox apple to the Esopus Spitzenberg, or the Baldwin! A fair bulk is, of course, desirable; but when we know, as we do know, that the aroma of the strawberry resides in *the outer coating* of the fruit, and that the inside furnishes only an acidity, we are well prepared to believe that a more than medium size, in a strawberry, is a disadvantage; because, in a given measure, there will be much less surface. Yet Mr. Hovey's inquiries are confined entirely to *the bulk* of the berries.

If size be the object of attainment, we are surprised to find so little mentioned, by this disinterested judge, of *Pele's Merveille*, a French variety, greatly exceeding Hovey's Seedling, not only in flavor, but *also in size*. This berry is described in the *Revue Horticole*, for September, 1849, as being "ovoid in form, *of the size of a pullet's egg*," etc.

It is assumed, in the second place, that Hovey's Seedling is the champion of the East; for no other standard of comparison is mentioned than this Seedling. Now it can, with ease, be shown, that many varieties stand higher in public estimation, at home, than Hovey's Seedling; and need only as good, and pertinacious, a pair of bellows *to puff them*, in order to eclipse them abroad.

Let us take Jenney's Seedling, originated in Cambridge, Mass., a few years ago; and *poh-poh-ed* out of the exhibition room, at its first showing, *by Hovey himself*.

The *fault (!)* with this fruit is its exceeding juiciness and tenderness. The boxes

containing it, standing long on a counter, will, by their own weight, express juice enough to saturate the box and flood the counter. No one ever found this fault with Hovey's Seedling! It is a good market fruit, mealy as a well-boiled potato!

These Jenney's Seedlings sell, in the Boston market, for 100 per cent. more than Hovey's; and my informant is ready to show, by confectioners in that city, that more than double the quantity of juice is extracted from a given measure of them, than from a like amount of Hovey's over-rated Seedling.

The quantity of the crop produced by this Seedling is also greater than those gathered from Hovey's; for it will bear many pickings of fine-sized strawberries, after Hovey's one crop of large berries is off.

I say nothing here of *Walker's Seedling*, originated in Roxbury, by the late President of the Massachusetts Horticultural Society, and which is declared by good judges to be very superior, only because I am not myself well acquainted with it. Nor need I mention here, to compete in quality and size with Hovey's Seedling, the Black Prince, Victoria, British Queen, or Myatty's Eliza. These are before the world.

One moment's attention to a remark of this candid editor, and I will relieve your patience of a disagreeable subject. Editor Hovey says, in the article quoted above, "a few plants (of McAvoy's) which we purchased, *to give the variety a fair trial!*" Ho! ho! Commend me to the fair trial which a rival berry would obtain at the hands of this Seedling Editor. His earnest desire to do justice by his competitor has hurried him on to pre-judge the fruit, even before he has seen it. Hear him. "We find a letter * * * which states *just what we had supposed to be the truth in regard to the merits of this new Seedling.*"

This tells out, at once, the whole character of this self-constituted judge; and shows how worthy he is to pronounce on the products of horticultural skill, which come in competition with his own. I wait, in anxiety, to read his glowing description of Mr. Parker Barnes's *Seedling Azaleas*, which took the premium, I am informed, by the unanimous vote of the committee, over Hovey's, on a trial of three years.—How he will praise his triumphant rival, and his conqueror!

The closing paragraph of this beautiful mass of "Pomological Gossip, or Old Maids Tea-table Scandal," is too rich to be omitted. Read it, Doctor, and hold your sides.

"If *Mr. Longworth's* knowledge of the strawberry is no greater than his knowledge of pears, we fear but little reliance can be placed upon his opinion of the new seedlings which originated in his garden, and for which *he* or *his* own gardener was awarded the prize offered in part by *himself*."

If *Mr. Hovey's* knowledge of fair dealing and decency is equal to his self-conceit and egotism, we would place much reliance "upon his opinion of the new Seedlings," which are rivals to those originated in *his* garden, and puffed in *his* paper; wouldn't you?

Very truly yours,

UP, UP, AND BE DOING.

A SPRING CAROL.

[Written for the Review, while the early zephyrs of Spring fanned the Author's cheek.—ED.]

BY FRANCES D. GAGE.

Up, up, and be doing; the spring-time is near—
Already the crocus and blue-birds are here;
There's a purling of joy, from the fresh gushing rills—
A murmur of buds, swelling out on the hills,
A hum of young life, if you'll list to the sound,
From insect and seed, bursting up from the ground.
The meadows and fields, donning velvets of green,
Embroidered with violets and daisies, are seen,
And the breeze as it passes at morning doth call—
"To the fields, to the gardens, come forth, one and all."

Up, up, and be doing; the sunshiny hours
Are dallying now with buds, and with flowers;
The tulip and jonquills spring forth from the night,
And hyacinths breathe out their sweets to delight:
And pansies, their golden eyes ope to the sun,
The snow drops proclaim that the winter is done;
The bees are abroad on their cheer-humming wings,
While high on the locust the oriole sings:
Will you list to his warble—"oh come, come away,
Merry maids, to the woods and the green fields, to-day;
And you, gentle ladies, come out, every one,
And see what your servant, the spring-time, has done;
He is asking your counsel, oh come, lady, come—
'Twill give charm to your beauty, and grace to your home."

Up, up, and be doing; there's work for you now—
Up, up, noble farmer, with spade and with plow.
All nature is calling for help; give you heed—
Bring forth the strong ox, and the high-mettled steed,
Turn the fresh teeming furrow across the wide plain,
Shout the song of free labor, make ready the grain;
The helpers are plenty—the sun-shine, the dew,
The soft falling shower are waiting for you;
Impatient, they call you—"come forth to the toil,
With hands strong and willing, there's wealth in the soil;

And labor is rest, if you labor aright—
Then up, and be doing, strong man, in thy might."

Up, up, and be doing; kind nature demands
All her children to labor with heart and with hands.
The garden, the orchard, the meadow, the wood,
The field and the forest, stream, fountain and flood,
All wake in the spring, from their long night of rest,
All active in duty, all work for the best;
And they bid thee, oh man, in thy strength and thy pride,

In wisdom and beauty, their labor to guide.
Up, then, and be doing; work, work, while you may—
Seize the hours as they pass, make the most of to-day.
Be true to thyself—thy reward shall be wealth,
Honor, long life, happiness, virtue and health.

Mount Airy, March 6, 1852.

Notices.

The Fruits of America, by C. M. Hovey, Vol. II, No. 1, January, 1852, is a continuation of this beautiful work, which is so handsomely executed at Boston, Mass., where, if anywhere, not only the knowledge of Horticulture and Pomology should exist, but where, also, the artisans may be found to execute such a beautiful work.

Like its predecessors, this number contains four highly wrought plates of as many choice fruits. Here are the beautiful and justly favorite Jefferson plum, the Beurré Langlier, and Hull Pears, and that brilliant beauty, the Fameuse or Snow Apple.

The text contains minute descriptions, and historical notices of standard and new American fruits, and the work will constitute a valuable collection.

I do not know how it is, that in a more northern latitude, with a cooler climate, shorter summer, and more slanting sunshine, the fruits, at least the pictures of fruits, are always so much more beautifully tinted than the realities ever become in these lower latitudes.—Who will explain this? Many specimens of familiar varieties brought from New York, were not known by our committee here.

The Cottage Gardeners' Dictionary; edited by George W. Johnson; Esq., London.

The reader of these pages has already become familiar, through extracts from the *Cottage Gardener*, with the names of some of the excellent contributors to this most practical periodical. The Dictionary here noticed is a capital manual, one which will be found invaluable to every gardener who may not be already supplied with some similar work of reference.

Mr. Beaton furnishes the Botanical classification; *Mr. Fish*, the general cultivation of flowering and ornamental plants;

Mr. Errington, the fruit culture and selection of varieties; *Mr. Appleby*, the selection and culture of Florist's flowers; *Mr. Barnes*, *Mr. Weaver*, and the *Editor*, furnish the articles relating to the kitchen garden. Other contributors have also aided to make up this excellent compendium, which may be ordered through Mr. Post, Cincinnati.

SUNDAY pamphlets, catalogues, etc., have been kindly forwarded to my address, which should have been acknowledged ere this, a few donors must now be satisfied with a brief enumeration of their missives; some of them will be more fully noticed at another time.

A Plan for an Industrial University for the State of Illinois, by Prof. B. Turner. This will be noticed in a future number, and is now merely entered upon record, and laid over for leisure to digest the plan proposed.

Annual Message of the Governor of California. It seems strange to receive such a document from such a far off land, and it is scarcely possible to realize that it is indeed a part of our own domain, which is "wide as the continent, clasping the seas."

Catalogue of fruit and ornamental trees, shrubs, vines, roses, and greenhouse plants, etc. Thorp, Smith, Hanchett, & Co., Syracuse Nurseries, N. Y.; 60 pages—a full descriptive catalogue.

The Annual Report of the New Haven County Horticultural Society, represents that ancient society to be still hale and hearty upon its vegetarian regimen, which will, I hope, long maintain it in a healthy condition.

Muskingum County Agricultural Society. Report of the Fourth Annual Exhibition. The Horticultural department appears to have been quite conspicuous, and the names of Cox, Barnard, Cherry, Dillon, and

Springer (the President,) appear quite conspicuous.

Chester County, Pennsylvania, Horticultural Society. Reports of Spring and Fall Exhibitions are both full and interesting.

Others omitted for want of space.

March Meteorology.

BY JOSEPH RAY, M. D.

Woodward High School, }
CINCINNATI, March 22d, 1852. }

DEAR SIR—It has some times occurred to me that a history of each of the months, in our climate, would be interesting to Horticulturalists, especially of those months on which the future crop of fruit is supposed chiefly to depend. I do not pretend to decide what month is the most nearly related to the fruit crop, but there is a general opinion that it is March.

Be that as it may, March is certainly one of the most interesting months of the year, in its meteorological character. January may forget to be cold, or July to be warm, but March never forgets to be stormy and unpleasant; and though it often puts on a smiling face, yet it never fails, at some period of its existence, to cut up some pranks, so as to justify the bad character that it has suffered from time immemorial. Of this we have just had a very striking example. On the 13th of the present month, the thermometer stood at 80°, and the mean temperature of the day was 69°.5. On Friday, the 18th, the mean temperature of the day was 22°, that is, ten degrees below the freezing point, and on Saturday morning the thermometer stood at 14°. I fear that such a great change of temperature has had a very deleterious influence on the prospect for fruit; but of this you are the best judge.

The following table presents the chief features in the temperature of March, for a period of 18 years, up to the present date.

March.	Minimum.	Maximum.	Day of Minimum.	Day of Maximum.	Coldest Day.	Mean Temperature of Coldest Day.	Warmest Day.	Mean Temperature of Warmest Day.	Mean Temperature of the Month.	Variation from the Average Mean.
1835	0	70	1	31	1	14.0	15	53.5	40.1	—3.1
1836	—4	71	12	30	11	12.2	31	58.1	36.1	—7.1
1837	20	73	4	27	3	27.2	20	57.8	41.8	—1.4
1838	11	85	3	28	2	24.2	28	70.5	48.4	5.2
1839	2	79	4	27	3	17.0	27	67.8	44.9	1.7
1840	21	75	11	1	11	31.5	1	64.7	47.7	4.5
1841	18	83	3	25	16	26.2	26	68.0	44.7	1.5
1842	25	85	12	19	11	34.2	20	68.5	52.4	9.2
1843	1	59	23	30	23	13.5	30	49.2	28.8	—14.4
1844	20	72	20	26	18	24.3	28	62.2	44.3	1.1
1845	18	77	20	30	19	23.3	30	67.7	44.5	1.3
1846	20	69	1	8	1	24.5	12	57.2	44.2	1.0
1847	14	72	15	29	15	23.8	29	58.2	40.2	—3.0
1848	5	86	4	31	3	17.7	25	67.0	42.3	—0.9
1849	28	73	22	14	3	34.0	14	64.5	46.5	3.3
1850	22	71	4	17	4	27.8	17	57.3	41.2	—2.0
1851	20	79	1	30	3	32.7	30	67.2	46.4	3.2
*1852	14	80	20	13	19	22.0	13	69.5	44.5	1.3

* These observations refer to the first twenty-one days of the month.

The average mean temperature of March, deduced from the mean of seventeen years, is 43°.2.

From the above table, it will be seen, that March, 1843, was the most anomalous in regard to temperature; and that the first twenty-one days of the present March are not particularly remarkable. I shall look with some anxiety to see what has been the effect upon the fruit-buds.

Yours truly,

JOSEPH RAY.

[March 23.—To day and yesterday, quite extensive examinations of the fruit-buds have been made, to ascertain the effects of the cold of the 18th, cited above at 14°, upon the swollen fruit-buds; of Cherries and Plums examined, even the most hardy kinds were found to be generally killed—of Pears, about three-fourths—and all of those which were most expanded are dead; of Apples, about one-half were destroyed, and especially those which were most forward. The Northern Spy and Rawle's

Janet were safer than others that bloom earlier. Dr. Kirtland writes, that some peach-buds had escaped the cold of January, other fruits were safe. March 20.—Ed.]

METEOROLOGICAL TABLE.
CINCINNATI, FEBRUARY, 1852.

THERMOM'R			WEATHER.			RAIN.	SNOW.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.		
1	37	38	cloudy	cloudy	cloudy		
2	34	35	do	do	do		
3	29	48	clear	clear	clear		
4	42	57	cloudy	do	do		
5	36	52	var. fog	cloudy	rain	1.35	
6	48	57	rain, var	var	clear	.10	
7	37	46	clear	clear	do		
8	33	44	do	do	do		
9	28	52	do	do	do		
10	40	50	rain	rain	rain	1.05	
11*	30	35	var	snow	cloudy		1.
12	24	32	cloudy	clear	var		
13	38	49	var	do	cloudy		
14	29	38	do	do	clear		
15	35	40	cl'y.snow	cloudy	var. rain		.45
16	35	52	cloudy	clear	var		
17	31	40	snow var	do	clear		.05
18	27	34	clear	do	do		
19	28	37	do	do	var		
20	31	32	cloudy	snow r'n	cloudy	.45	
21	34	37	cl'y. rain	rain	rain	.95	
22	42	49	cloudy	cloudy	cloudy		
23	38	48	clear	clear	do		
24	44	67	do	do	clear		
25	39	46	do	do	do		
26	28	42	do	do	do		
27	31	42	cloudy	var	cloudy		
28*	37	41	rain	sn'w cl'y	var	1.20	
29	16	39	clear	clear	clear		

Total.....Inches, 5.10 1.50

*11 and 28 max. at sunrise.
Rain and snow water in the month, ..Inches, 5.20
Clear days in the month..... 9
Variable, sun at times13
Cloudy, sun not visible..... 7-29
Mean temperature of the month.....38.96°
Do do Feb. 1851.....42.48
Do do do 1850.....35.66
Do do do 1849.....32.43
Do do do 1848.....38.60
Do do do 1847.....37.33
Do do do 1846.....36.25
Do do do 1845.....42.12
Do do of Feb. in the above years,37.98

WINDS—REMARKS.

- 1 Light W.
- 2 do N, calm, calm.
- 3 do S.
- 4 Calm, light S., calm.
- 5 do do
- 6 do light S W., and brisk N. Canals open.
- 7 Light N W.
- 8 do N E., calm, light N. W., calm.

- 9 Calm, light S. W. and S., calm.
- 10 do light S E., calm.
- 11 Brisk S W., high W., light W.
- 12 do W., light W.
- 13 Light S W. and W., brisk N. W.
- 14 do N W.
- 15 do do and S. W., brisk W., high N. W.
- 16 Calm, S W., brisk W.
- 17 Light N E., N W.
- 18 do N.
- 19 do do
- 20 do N E., and E., sleet.
- 21 Calm, calm, fog P. M.
- 22 do do, Hellebore and Chickweed in bloom.
- 23 do light S. W., brisk S W.
- 24 Brisk S., calm at eve, high N. W. at night.
- 25 do W., and N. W.
- 26 do N., light W.
- 27 Light N E., and E.
- 28 Calm, light N. W., high N W and W.
- 29 Light E., calm at night.

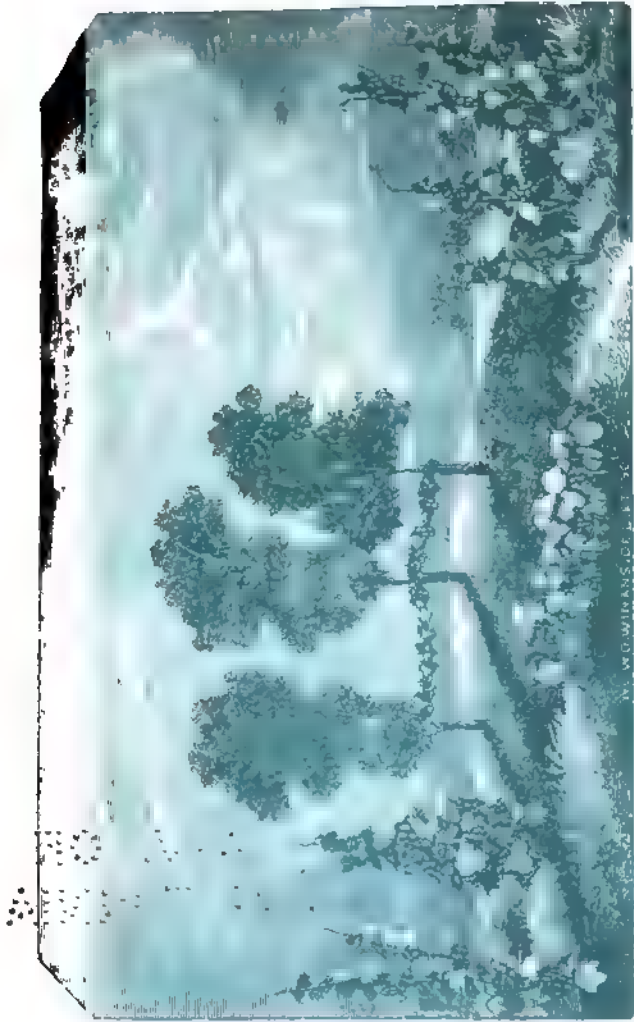
The lowest temp. in the month.....16°
Highest do do67
Range,.....51
The mean temp is about 1 degree higher than the means of February of the last eight years.
Mean depth of rain and snow water, in the month of February, for the last eight years, is 4 inches.
Mean temp. of the three winter months, last past.....32° 63
The remarkable feature of the last winter is the great severity of the cold in the months of December and January, which is believed to be altogether unprecedented here.
Calms and light winds prevailed. High winds, for a brief period, on four days. No storm in the month.
JOHN LEA.

Fruit Trees killed by the Cold.

FRIEND CLARKSON, of the *Brookville American*, a very Farmers' paper, says that a large portion of the Apple, Peach, Pear, Plum, and Cherry trees were killed in that part of Indiana by the severe frosts of January. He has visited several orchards, and finds the trees absolutely dead, especially the grafted fruit. The buds may be alive, and even swelling, but the inside of the bark of the tree itself, the main stem, has changed from a clean white to a dirty brown. He states that the same thing is true about Blooming Grove, and apprehends that it is general. He estimates the loss at \$500,000, and that fifteen years of constant horticultural labor and application will not restore the orchards to the condition they were in last season.

From an extended correspondence, it appears that many persons, widely separated, apprehend similar results.

THE
OF



MOSES OF TRAMMEL.



VOL. II.

MAY, 1852.

No. 8.

Pomology.

Old French Orchards on Detroit River.

Detroit, 24th March, 1852.

DOCT. J. A. WARDEN:—I notice in the March number of the Horticulturist, that our worthy and very facetious friend, Lewis F. Allen, of Black Rock, discourseth in this wise concerning us.

"I would give a trifle to know if the old French pear-trees on the Detroit river were ever struck with the blight. But they never seem to know anything in that region about their pear-trees—or if they do, they don't tell of it—and we are not likely to be much enlightened from that quarter."

We are free to acknowledge that we don't know much, and we do not always know exactly how to tell what little we do know, but we "guess" these old pear-trees never were and never will be struck with the blight; they are exceedingly tenacious of life, the most of them are left to shift for themselves; yet they thrive and bear abundantly, but the most of the fruit is fit only for cooking. Occasionally we find a tree that bears very good fruit.

Last fall, in our gossip with the Buffalo Horticultural Society, we said a few words respecting these old trees. But as Mr. Allen was absent from the meeting at which our

note was read, I will here state that on the 24th day of August, 1851, I visited one of these old pear-trees, which I presume is a seedling, and has the appearance of being at least one hundred years old. I assisted in measuring it and found it to be fifty-eight feet high, and at four feet from the ground the trunk measures eight feet in circumference. The lower limbs are about twenty feet from the ground, and extend some twenty feet in either direction. The tree is very thrifty, making considerable new wood, and bearing from twenty to thirty bushels of good pears each season.

The fruit is medium size, yellowish green with splashes and dots of russet; shape oval; stalk one inch long, slender, slightly curved, set in a very slight depression, with a lip rising upon one side; calyx open, set generally without depression; flesh white, rather coarse grained, juicy, with a rich, somewhat acid flavor, good for the dessert or for cooking. The fruit begins to ripen and fall from the tree about the fifteenth of August, and continues to ripen and fall till the middle of September. I took scions from this tree last season and put them into quince stocks, in hopes of continuing the

variety ; for I fear the old veteran will soon be demolished to make room for improvements.

I have a large number of pear-trees in my nursery, both on quince and pear stocks, and I have never known the blight to attack a tree on my premises, that was raised there. However, I have sometimes had trees that came from other nurseries struck by the blight, but if it does not make its appearance below the bud or graft, I amputate below the injury, and thus generally save the tree. I should like to continue these remarks a little further, but I have just received a very interesting article from Judge Eliot, who resides near Sandwich, Canada West, in answer to a note I addressed to him a few days since, requesting information from him respecting the old French pear-trees of Detroit river. Thinking Judge Eliot's remarks will prove more acceptable than anything I can write, I hand you his letter entire. Yours, etc.

J. C. HOLMES.

The Willows, near Sandwich, Mar. 19, 1852.

DEAR SIR:—I am now suffering so much from rheumatism in the face, that I am unable to go out to procure you all the information I could wish respecting the pear-trees of the Detroit river. I have, however, just ventured to an old orchard of mine near the house, to ascertain the size of a pear-tree now standing in full vigor. On measuring it with a tape, about a foot from the ground, I find it to be six feet four inches in circumference, and, as near as I can judge by my eye, between, at the very least, sixty and seventy feet high. At the same time I measured the stump of an apple-tree, which I cut down this winter, being somewhat decayed, and that is nine feet three inches in circumference, one foot from the ground.

Some years ago I had an orchard of old trees, still vigorous and healthy. I laid the ax to them with extreme regret, they were so large ; but from improper pruning by the former owner for many years, they had extended into naked branches upward of twenty feet in length in many instances. You will see the same marks of senseless pruning, (and which, by the by, I have often seen performed with the ax alone,) through most of the French orchards—I may say, all on this side of the river. The immense weight of fruit at the ends of the branches used to split the limbs from the trunk : on this account I advocate the besom head, and not the English fashion of an inverted umbrella. Our summer sun is too powerful here for the adoption of the latter form. However, I remember there were apple and pear-trees in this orchard much larger than any of which I have just given you the dimensions.

I did measure the size of one of those pear-trees, which appeared to me, I recollect, a monster, and bore prodigiously, such fruit as it was ; but we could never gather the pears, nor could we reach the lower limbs, to climb it, without the aid of a ladder about eighteen feet long. I was sorry to destroy such venerable trees ; but you know what the generality of seedling apples and pears are for the table.

There is one tree now on my farm, on a piece of land I lately purchased ; it is a thrifty one, half a century old, and bears an apple not larger than the top of my thumb, and as bitter as gall. It is not a crab ; but it is a curiosity, sporting most strangely in regard to shape, for some of the apples are triangular, some square, round, oval, flat, and, in short, every form that a mathematician could imagine.

In regard to the orchard I cut down, I can, perhaps, give you some idea of its

age ;—the farm on which I now reside, was one of the three very first settlements made on this side of the river. Louis Plichon, Pierre Dinan, and Jean Baptiste Drouillar were sent from Montreal, and arrived at Detroit on the 26th of July, 1749. Drouillar brought with him his wife, five sons and three daughters, and was immediately placed by the commanding officer of the French, then at Detroit, on the land now occupied by me. To enable the settlers to work at once, and settle on their locations, the French government very generously rationed them and their families for a year, and lent them a pair of oxen, a plow, and other agricultural implements for the same period.

The French sowed their apple seeds at once, and planted out their trees as soon as ever the ground was sufficiently cleared to receive them. The orchard which I cut down must, therefore, have been between eighty and ninety years old. When I first pitched my tent in the Petite Côte, I received much intelligence respecting the old French inhabitants from an old woman of the name of Fourier, a very near neighbor of mine, who has been dead for some years. She was a girl of about ten or twelve years of age when the Canadas were ceded to Great Britain. She remembered perfectly well the arrival of the British at Detroit.

I am very sorry that the information I can give you is so meager. If I should be well enough to gather aught more on the subject, I will do so with much pleasure; but postpone your publication, and visit our vicinity yourself. I will go with you to collect something more about the pear-trees of the river Detroit.

I am, dear sir, very respectfully, yours,
CHARLES ELIOT.

A neighbor who told me that he was going to Detroit on Saturday, and promised

to be the bearer of my letter, neglected to do so. I open it, to add hurriedly before my son starts for Sandwich, that I have since recollected an article, on "the Detroit river Pear-trees," in "the Horticulturist," which, on reference, I find to be from the pen of Mr. Lewis F. Allen, of Black Rock, N. Y. It is in the 6th vol., (February number, 1851,) page 65. He is voluble about "these grand old trees," their "vigor and maturity;" states that "they tower up fifty or sixty feet high," that they "measure six to nine feet in circumference," and that "twenty to thirty bushels is a common crop for the largest trees." These "dear old trees!"—dear they are, and I take shame to myself for having cut them down! Mr. Allen talks as feelingly of them, and I like to hear him, as a lover does of his mistress. I believe him to be under the mark as to their fecundity and height. If my memory be not very treacherous, the large pear-tree, that I cut down, was nearer twelve feet than eleven in circumference. Off one of those old apple-trees I recollect once taking forty-five bushels. I never had occasion to measure the quantity except that time; but they all ever bore enormously, though only on alternate years. They required one year's rest to recruit their exhausted power; for they never, from the moment the pips were put into the ground, received other manure than their own leaves, which winter cast around them, and which were left to rot on the surface.

To improper pruning alone I attribute their premature decay; for the limbs were never taken off close to the branch. Stumps were left, a foot or so in length, and there remained to wither and consume the tree. Such was the case when I took possession of the farm. There was, and is, a vitality about these "grand old trees," which it seems difficult to subdue. I have one tree

that was utterly rotten inside, which is now completely healed up, and become again a healthy subject.

None of these old trees have ever been grafted. When I first came here, some old French Canadians, who chanced to see me grafting, smiled incredulously at the idea that a "piece of stick," as they termed it, stuck into the slit of another branch, would ever live and bear fruit. I assure you these men, who were respectable farmers of my neighborhood, watched, with great interest, the progress of the "piece of stick."

Mr. Allen says, that "these settlements (around Detroit) were commenced about the year 1670." Is not this a mistake? The dates, given in my letter of the first settlement of the Petite Côte, are from public documents, which I believe to be still in existence on your side of the river. Jacques Cartier discovered the Gulf of the St. Lawrence, in 1534; in 1535, Anticosti, and the St. Lawrence up to Montreal, a corruption of Mont Royal; then he returned to France; sailed again, in 1540, for the St. Lawrence; built the fort, which he named Charlesbourg, near the present site of Quebec; returned again to France; and embarked once more, in 1549, but was never heard of after.

Sieur de la Roche, in 1598, sailed from France, landed and left a small party at Sable Island, near the coast of Nova Scotia, and returned to France for supplies. The party left at Sable Island, after suffering very great hardships, also went back to France, in a vessel despatched for them by Henry 4th. At this period Canada appears to have been deserted altogether by the French.

Chauvin and Pontgrave afterward failed in endeavoring to establish a colony on the mouth of the Sagueray. This colony, M. Champlain, another navigator, afterward—

in 1608—removed to Quebec, which town he built and fortified, and became the founder of the government of Canada. Champlain penetrated into the wilds of savage life as far as Lake Ontario. It was only in 1622 that the Jesuits first commenced their missions among the Indians.

By the peace of 1632, between England and France, the provinces of Quebec, Nova Scotia, and Cape Breton, were ceded to France. Canada was, at that period, governed by a company of clergy and laity, formed by Richelieu, composed of one hundred persons, and called "the Company." Their feebleness and maladministration induced the French King, Louis the 14th, by the advice of Colbert, in 1663, to erect Canada into a royal government. The cruelties perpetrated on the Indians produced desperate retaliations, and, to prevent surprises, the settlements were ordered to be concentrated, and such lands only were allowed to be cultivated as were near each other. From this circumstance, and the dates of this slight sketch, I am inclined to draw the conclusion, that emigration could not have extended so far as Detroit, in 1670. I know not from what source Mr. Allen gives the period of habitation so early; but it is certain that the settlers, who were all indubitably French, must have journeyed from Quebec. My information, derived from old inhabitants here, long since dead, is, that the first settlements of civilians were formed on this side the river.

I have somewhere read a very graphic description of the discovery of the Niagara Falls. A young man, named Joseph Price, was one of the earliest missionaries sent to convert the Indians. He was accompanied by a Henry Wilmington, who volunteered to attend him. Price received directions to go farther into the continent of America, toward the north, than had been yet ac-

complished. They sailed from Plymouth, and, after thirteen weeks, (the voyage occupied that space in those days,) landed at Boston, then a very small but thriving village. They began their journey and reached Lake Oneida, whence, in canoes, they entered Lake Ontario. They, in company with a chief, named Maiook, and some other Indians, paddled on till they discovered the Falls of Niagara. The amazement of the whole party, particularly the Indians, was admirably delineated by the narrator. The French, from Quebec, might have traveled as far as Ontario; but Price believed his party to have been the first to behold that wonderful cataract. The exact time when this occurred was unfortunately not mentioned.

Do not blame me if my letter resembles a woman's, by having the postscript so much longer than itself. C. E.

REMARKS.—This history of the fine old trees is very acceptably received from Mr. Holmes. I have myself enjoyed their umbrageous shade and eaten of their beautiful crops, and should have noticed them ere this, but am now glad to present my friends with this home account of them, which is better, although perhaps almost too historical for some distant readers.—ED.

Pomological Chit-chat.

DR. WARDER:—*Dear Sir*,—It is now a long time since I have held a Pomological chit-chat with the readers of the Review, and I had given up the thoughts of doing so for the present, as the time has arrived for out of door operations. But "winter yet lingers in the lap of spring" and this is a most inhospitable day; snow, rain and sleet; the trees covered with ice, and take it all in all, it is quite enough to give one the blues. By the way, Mr. Editor, I have a capital recipe for the cure of the "hypo." Let the patient roam among fine fruits and fragrant

flowers; or, if it be out of season, let him talk or write about them, which amounts to about the same thing; and my word for it, the disease will leave him—it can not remain in such company.

We have had a most severe, long, dreary winter. That old gentleman, "the oldest inhabitant," says he never experienced one more so, and yet, the tender trees seem to be but little injured. Peach buds are mostly alive. The Osage Orange is less injured than it has been in some former winters; and we have hopes that it may prove sufficiently hardy for hedge purposes.

We hope and trust the cold weather has destroyed much of the insect tribes, which of late years have very much increased in numbers, and have been much more ravenous than formerly. However, I do not like to talk about "bug-ology" very well, as it is not quite so agreeable as it is to talk about fruits. Won't that Curculio-man's recipe kill other insects, just as well as it does the Curculio? Or, don't he sell the recipe to destroy any other insects? Some of our pomologists here intimate that the whole is a humbug, and refuse to purchase the recipe. This is to be wondered at, as some of them have heretofore made large investments in similar articles, and this would very much increase their stock in trade. But we will leave this subject and talk about fruits.

Ladies' Sweeting.—This apple, so highly prized in some sections of the country, and particularly in the vicinity of North River, has been fruited here for two seasons, with indifferent success. So far, it has not proved equal to Danvers' Winter Sweeting; which, by the way, is one of our most productive winter apples. However, let it be borne in mind, that the few specimens of the fruit, all from young trees, is not deemed a sufficient test.

Vandevere.—This apple has been in cultivation many years, and yet seems to be but

little known. A beautiful fruit, of hardly medial size, and pretty generally fair. The tree very productive; fruit very good, crisp, and tender, and will keep till midwinter. It is said to succeed best on a light or sandy soil. [This is our Ox-Eye.—Ed.]

Herefordshire Pearmain.—This is also an old variety, and an apple of superior excellence. Fruit of medium size, round oblong. Surface mostly stained, and mottled with brownish red, on a greenish yellow ground. Flesh pale yellow, fine grained, tender, and of a rich, high, subacid, aromatic flavor. Tree productive, fruit generally fair, and in perfection till after midwinter. This apple was introduced here some twenty-five years ago, under the name of "Red Gilliflower," and at a later period, under the name of "Red Seek-no-further."

Belmont.—This apple, so celebrated, so fine, so fair, in Ohio, has not succeeded very well with me. Fruit, so far, has "spotted" badly. The soil is rather light and gravelly. Does it not require a rich deep soil? The fruit is very beautiful when grown in perfection. I shall try it on a deep rich soil. [It is most beautiful, rivaling Mela Carla.]

Gravenstein.—This is a noble fruit, and very beautiful when fully ripe. Flesh tender, crisp, and of a rich aromatic flavor. Tree productive, and a fine upright grower. Mr. Downing says the tree bears young. However, it has not proved so with me.

Northern Spy.—This fine apple I have spoken of before, and year after year it is growing more popular. Indeed, it is now pretty generally admitted to be a fruit quite as valuable as any other. Here, so far, it has proved very fair and fine, and commands nearly double the price of any other apple. Our Boston folks say that it has proved rather indifferent there. If so, and it should be a failure there, so much more valuable would it be in western New York; as we

shall by and by lay them under contribution for their supplies of this apple.

Rostizer Pear.—Has now fruited with me two or three seasons, and has always proved fine. Fruit of rather small size, of very delicious flavor, productive, and truly fine.—Succeeds well on the quince, or on the pear.

Onondaga or Swan Orange.—This noble pear has been much sought after of late. It is a pear of the largest size, and of fine appearance, and may be classed as good; or perhaps in the opinion of some as very good. Flesh somewhat coarse, but juicy, melting and fine flavor. The tree is a strong grower and productive. Ripens in Oct. and Nov.

Florence Cherry.—This fine cherry has fruited with me for several years, and it has but four superiors. Fruit large, heart-shaped, fair, smooth; skin yellow amber, mottled, and with a fine red pulp. Flesh juicy, sweet and firm. Ripens rather late, which adds to its value.

Butner's Yellow.—This is the only real yellow that I am acquainted with. Fruit of medium size, of good flavor and ripens very late, some ten days later than the Florence. These two varieties, and Downer's late, are perhaps the best for keeping. I have another variety which I received under the name of Late Black Bigarreau, and particularly recommended to me as a late keeper. Fruit of small size. Indeed there seems to be but little besides the pit and skins; ripens about the first of September; and so bitter that the boys or birds rarely meddle with it. It is worse than useless.

Fastolf Raspberry.—So far has proved very fine, productive and quite hardy. *Red Franconia*, and the *New Monthly*, are also truly fine and valuable sorts.

Ogden's Black Currant.—Proves to be a very valuable variety. Fruit of extra large size; larger than any other sort, and of fine flavor.

“*Cataract*” *Gooseberry*—A seedling grown by Judge De Veaux, of Niagara Falls. Of medium size, white, and of very good flavor; and so far free from mildew. Productive and valuable.

But I must close these scribblings. Pomologists seem to be wide awake just now. The “American Pomological Congress” is to meet in Philadelphia, in the month of September next. May we not anticipate a very numerous attendance—much larger than ever before? I doubt not, but that nearly every State in the Union will be represented there. Much remains to be done, and there are some things that should be undone.

Yours, very truly,

B. HODGE.

Buffalo Nursery March 30, 1852.

Plan for the Improvement of Fruits.

Of the large number of different varieties of fruits cultivated in the United States, the apples are the class of which we can show the most varieties that have originated in and are peculiar to this country. Nearly all of these have been originated through the want of nurseries of grafted sorts; hence the farmers were compelled to plant the seeds and raise the trees up to the bearing state, when, among many thousands, every locality has some fine and valuable sorts, surpassing all those imported, in hardiness, good bearing, and usefulness.

As it is true that every section of the country, every locality, has a peculiar climate, different in some respect from every other, so it will be found, that every such variety of climate will have its own peculiar sorts of fruit, which will attain the highest degree of perfection, only in their native place and will lose some of their good qualities so soon as brought out of it; horticultural societies and pomological conventions have tried to mark out the varieties of fruit which are

worthy of general cultivation, and still there is no such thing.

We have here in the West an apple called the Jenneting or Rawle's Janet, which from the lateness in which it opens its blossoms, is one of the surest bearers, and this quality in our fickle climate, with its warm springs and late frosts, is of such importance that orchards are sometimes planted almost entirely of this sort. How important and desirable would it not be, if we could originate an *assortment* of apples, all of which would partake of this valuable quality of late flowering.

We also have here the wild crab-apple, *Pyrus coronaria*, whose fruit is not much inferior in size and quality to the European wild apple, *Pyrus malus*, but with a different strong perfume. It is very probable, that from this species, a *new type of apples*, of very strikingly different qualities either for cider or other use, could be produced. A gentleman near St. Louis has found a wild apple-tree on one of the prairies near the city, whose fruit has all the appearance and fragrance of the wild crab, but its size is at least four times greater, being about as large as a medium sized Jenneting.

All the different varieties of the European plum have proved a failure here. If the curculio does not cause all the fruit to drop, a disease similar to the rot in the grape destroys the remainder; they never appear in our market in any quantity, and the few exhibited in fruit stores are sold at exorbitant prices. The plums which we see in our market are varieties of two distinct native species, *Prunus nigra* and another allied to *P. chickasaw*, and it is not rare to meet with baskets of those plums of fair size and tolerable quality. Are not those the sorts from which we ought to start, and try to get an assortment of plums for our Western orchards? and why should it not be possible to

originate sorts as large and fine as the prunes and gages, although of a different type?

But many a fruit grower will ask who can afford to raise orchards of thousands of seedling trees with the uncertain prospect of getting one or perhaps two superior kinds of fruits in the whole, and how can those two trees pay him for his labor and expense?

So long as the old mode of planting and raising seedling trees is followed, there is little prospect that any one will try it on an extensive scale. If Mr. Van Mons, in raising his eighty thousand seedling pears, had been compelled to have a standard tree of every one of them, the experiment would probably have been impossible for him, and the time required to get up to the tenth generation in pears, would have required scarcely less than one hundred and fifty years.

The plan which is now followed to raise and try seedling fruit, is the following: The seeds are selected from perfect specimens of those varieties which possess the required qualities, the blossoms of which have been fertilized with the pollen of another fruit of the *same class*, a resemblance to which is desired; or they may be taken simply from fine fruit not impregnated artificially. They are planted rather thinly in good rich soil, and attended to as usual. During the summer they are closely observed, and the more promising are marked—for instance, such as are less thorny, are moderate growers, and of somewhat stout appearance; the very thorny plants, of thin tall growth, may be rejected. In the following spring the promising seedlings are transplanted in rows like nursery rows, about three feet apart, and one foot distant in the rows, and every one numbered. In order to ascertain in the shortest time the quality of the fruit which those seedlings will bear, their tops are cut off and used as grafts, if they are strong enough, and inserted as follows:

The apples are grafted on *bearing dwarf apples*, that is, on other sorts of apple-trees which have been dwarfed by being themselves grafted on the parent stock. Ten to twenty grafts of different seedlings may be inserted in the top or ends of the limbs on one of those dwarfs, if it be of sufficient age and size; in this way they usually show their fruit about the third year, which makes a gain in time of at least ten years.

As one of those dwarf apple-trees requires only six feet square of land, so one thousand may well stand on an acre, and ten thousand seedlings may be tried at one time on one acre in less time than four years. Every graft should be numbered with the same number as the seedling from which it was taken, in order to know where to get a supply of grafts if the fruit should prove valuable: those grafts which prove worthless may be cut off or used to try others on their tops.

Should any of the grafts grow with too much vigor and refuse to bear, it may be forced to do so by girdling the limb on which it is inserted. Strong growing seedlings with large leaves and thick wood generally prove to be summer or fall apples.

In the absence of dwarf trees of a proper age and size, the same course may be followed with bearing standard trees, but less conveniently than with dwarfs.

Pear seedlings are tried on pears dwarfed on the quince and treated in the same way, only the pears require more space, about ten feet square will do for them. Native plum seedlings may be tried on bearing plum-trees of the red or yellow Missouri plum resembling the chickasaw, or on others if these can not be had.

In Europe there is no tree or shrub bearing anything like an eatable fruit, which has not its variety, even the hazelnut, the acerb sloe, the sorbus, the rose and medlar have their representatives in the orchard; and still

America in its temperate zone, is richer in native fruits; for the one grape of Asia, we have five [or indeed many, according to some botanists;] we have one apple, *Pyrus coronaria*—several plums, *Prunus nigra*, *chickasaw*, etc.—two walnuts, *Juglans nigra et cinerea*—three hickories, *Carya olivæformis*, *alba*, *porcina*—two chestnuts, *Castanea americana et chinensis*—one hazelnut, *Corylus rostrata*—three black currants, distinct from *Ribes nigrum*—one gooseberry, *Ribes triflorum*—one persimon, *Diospyros virginiana*—one papaw, *Anona triloba*—several strawberries, *Fragaria virginiana*—two raspberries, *Rubus idæus americana*—one mulberry, *Morus rubra*—with many other less important fruits, every one of which could be made the type of a whole class of new fruits, besides what are adapted to our climate, of the exotic sorts.

I do not herewith pretend to say that American pomologists have done less in this line than the Europeans; they have the results of thousands of years in their possession, the object is only to show what materials we have on hand, what might be done with them, and how to attain this design in the shortest time and with the least trouble

NS. RIEHL.

St. Louis county, the 24th Feb., 1852.

Strawberries Again.

DR. WARDER:—Of Mr. Hovey's accurate knowledge of the value of McAvoy's superior seedling strawberry, without even seeing the fruit, no one will doubt, when informed of the short time it took him to discover the sexual character of his old seedling. If my memory serves me, it was not more than eight or ten years. I send evidence of this from his publication.

The most intelligent child of ten years of age, in our back-woods strawberry patches, when the Hovey's seedling is in full blossom, could not be positive that it was purely pis-

tillate, and that a field of 100 acres would not bear a perfect fruit, without staminate in their vicinity, till he got within forty or fifty feet of the blossoms, on the clearest day.

To entitle Mr. McAvoy to the premium, it was to be in *all respects superior to Hovey's seedling*. What opinion could our strawberry committee form, when it was exhibited before the society, for three seasons only, in competition with the Hovey. Although, for those three years, the fruit was of finer flavor, and the average size of the fruit not only larger than the Hovey, but his berries larger than any of the Hovey that were exhibited.

Mr. Hovey stands too high, in his own estimation, to regard such evidence, when it militates against his interest. Let us know if I am correct, about the hasty and incorrect decision of our strawberry committee, and whether it was more than three years the committee waited, before they gave their hasty and erroneous decision.

FAIR-PLAY.

EVIDENCE.

Mr. Beecher says, in the second volume of the Western Farmer and Gardener, p. 274:

"In November, 1842, Mr. Hovey says, that, of four kinds mentioned by Mr. Coit as unfruitful, two were so '*from the want of staminate or male plants*;' and '*the cause of the barrenness is thus easily explained*.' And he goes on to explain divers cases upon this hypothesis; and still more resolutely he says, that all wild strawberries have not perfect flowers; '*in a dozen or two plants which we examined last spring, some were perfect, having both stamens and pistils; others, only pistils, and others, only stamens*;' thus showing that the defect, mentioned by Mr. Longworth, exists in the original species.' He closes by urging cultivators to set rows of early Virginia among the beds, for the sake of impregnating the rest.

"Mr. Hovey's next formal notice was exactly one year from the foregoing, November, 1843, and it appears thus: 'We believe it

is now the generally received opinion of all intelligent cultivators, that there is no necessity of making any distinction in regard to the sexual character of the plants when forming new beds. The idea of male and female flowers, first originated, we believe, by Mr. Longworth, of Ohio, is now considered as exploded. Such a sudden change as this was brought about, he says, by additional information received during that year by means of his correspondents, and by more experience on his own part. He says nothing of male blossoms and female blossoms, which he had himself seen in wild strawberries. Mr. Hovey then assumed the theory that cultivation, good or bad, is the cause of fertile or unfertile beds of strawberries, and he says—'In conclusion, we think we may safely aver, that there is not the least necessity of cultivating any one strawberry near another, to insure the fertility of the plants, provided they are under a proper state of cultivation.'

"Mr. Hovey now instituted experiments, which he promised to publish, by which to bring the matter to the only true test; and he, from time to time, re-promised to give the result to the public, which, thus far, we believe, he has forgotten to do.

"His magazine for 1844 opens, as that of 1843 closed; and in the first number he says, 'The oftener our attention is called to this subject, the more we feel confirmed in the opinion that the theory of Mr. Longworth is entirely unfounded; that there is no such thing as male and female plants, though certain causes may produce, as we know they have, fertile and sterile ones.'

"Nevertheless, in the next issue but one this peremptory language is again softened down, and a doubt even appears, when he says—'If Mr. Longworth's theory should prove true,' etc. We, among others, waited anxiously for the promised experiments; but, if published, we never saw them. The subject rather died out of his magazine until August, 1845, when, in speaking of the Boston Pine, a second fine seedling of his own raising, he is seen bearing away on the other tack, if not with all sails set, yet with enough to give the ship headway in the right direction: 'Let the causes be what they may, it is sufficient for all practical purposes to know, that the most abundant crops can be produced by planting some sort abounding in staminate flowers, in the near vicinity of those which do

not possess them.'—p. 293. And on p. 444, he reiterates the advice to plant near the staminate varieties. In the August number for 1846, p. 309, Mr. Hovey shows himself a thorough convert to Mr. Longworth's views, by indorsing, in the main, the report of the committee of the Cincinnati Horticultural Society. We hope, after so various a voyage, touching at so many points, that he will now abide steadfast in the truth.

"We blame no man for vacillation while yet in the process of investigation, nor for coming at the truth gradually, since this is the necessity of our condition, to learn only by degrees, and by painful siftings. The very first requisite for a writer is, that he be worthy of trust in his statements. No man can be trusted who ventures opinions upon uninvestigated matters; who states facts with assurance which he has not really ascertained; who evinces rashness, haste, carelessness, credulity, or fickleness in his judgments. The question of perfect or imperfect blossoms depends upon the simplest exercise of eyesight. It requires no measurements, no process of the laboratory, no minute directions or nice calculations; it requires only that a man should see what he looks at.

"After a comparison of the opinions and facts, through a space of five years, with the most distinguished cultivators, east and west, Mr. Longworth is now universally admitted to have sustained himself in all the essential points which he first promulgated, not discovered, for he made no claims of that sort. The gardeners and the magazines of the East have, at length, adopted his practical views—many of them after having stoutly contested them.

"We do not think that the admirable benefits which Mr. Longworth has conferred upon the whole community by urging the improved method of cultivating the strawberry, has been adequately appreciated.—We still less like to see gratitude expressed in the shape of snarling gibes and petty cavils."

Domestic Guano.

POULTRY-DUNG, if saved properly, will be found nearly as good as guano. The evacuations should be gathered weekly, put away in a barrel, and sprinkled over with pulverized charcoal or plaster.



The Vineyard.

Cellar Treatment of Wine.

WINE of strength, intended to mellow in the wood, should be put into the largest casks which can be conveniently obtained, for most wines mellow best in a large body.—They should be frequently examined, and if the cellar be moist, placed upon elevated tressels, touching no part of the walls. If the cellar be too humid, new apertures should be made, or the old ones enlarged; in such cellars the barrel staves are apt to decay, and let out the wine. Old cellars are better than those newly built, for it is observed that in the last, the wine does not keep so well. The loss in a humid cellar by evaporation is much smaller than in one which is dry. Aqueous, and no doubt spirituous evaporation, by the pores of the wood, goes on while the wine is mellowing; this does not amount, in a cask holding eighty gallons, to more than a glass a month, in a humid cellar; but in a dry one, though the casks are preserved better, the loss is frequently as much as two bottles in the same space of time.

The barrels should be placed after the vintage, upon square pieces of timber, and these should rest upon traverses of a larger size, placed upon the floor three feet asunder.—These traverses should not be more than five inches square, nor the uppermost pieces on which the barrels rest be more than three or four. The casks should be kept steady by wedges, and they must be kept so far forward from the wall of the cellar that the inner ends of the casks may be easily examined with a candle. Casks should never be placed upon each other, when it can be avoided, as in case of accident, or for ullage, it is difficult to get the lower tier cleared. The French call this mode of placing casks *Engerbet*.—

When cellar room is scanty, however, it is difficult to dispense with the practice.

It is agreed, that the longer the wine remains in the wood, the better it gets, the uttermost term which it will bear in that state being known. Delicate and light wines should be bottled as short a time as possible, for this class gains little by remaining in that state. Strong bodied wines, on the contrary, should remain long in bottle, in which state they improve best. Bottling, though a very simple operation, requires care and regularity in the performance. The admission of air into the cask during the process of bottling, is inevitable, and if the operation be protracted, the wine, especially if it be of a very delicate or superior kind, is certain to be injured. The best plan in bottling delicate and expensive wines, which will enable them to be drawn off to the last drop in full perfection, without hurrying, or even to be drawn off slowly for drinking, is that adopted on the Continent: a bottle of fine olive oil is poured into the cask, by which means acidity or moldiness is effectually prevented. For a year's duration, the wine will preserve its quality perfect. This arises from the oil covering the surface of the wine, and excluding entirely all contact with the external air.

Bottles should be selected of good manufacture, and of equal thickness throughout, or they will be liable to break in the bin when piled high; and twenty-four hours at least before they are filled, the bottles should be cleansed and rinsed. Shot should never be used, for the acid of the wine is apt to act upon such as are left jammed in the hollow of the bottom. Clean gravel is better, or a small iron chain, the links minute, and yet loose as they can be procured. The bot-

bles, should then be reversed to drain in planks having holes for the necks, afterward they should be rinsed in a little brandy, if the wine to be bottled is weak and of small body, letting them drain as with the water, but not until quite dry. Very fine wines are injured by the brandy, and for them this process must not be used. The corks must be sound, well cut, so as to press equally on every part of the neck, and perfectly new, or they will impart a bad taste to the wine; they must be supple, or there is a chance of their breaking the bottles. Any corks with blackness, or the remains of the bark upon them, must be rejected. The corks should be driven home with a wooden mallet, the weight of which is regulated best by experience.

Bottles should be waxed, or rather stopped with a composition. It is the custom among many wine-merchants merely to seal over the tops of the corks. This is not enough—the glass should be inclosed, to prevent any air passing between that and the cork. In France, for every three hundred bottles, two pounds eight ounces of rosin are mixed with half that quantity of Burgundy pitch, and a quarter of a pound of yellow wax, adding a small portion of red mastic; these are melted together and taken off the fire when the froth rises, then stirred and placed on again, until the mass is well combined; in some places tallow, in a smaller quantity, is substituted for the wax, for if there be too much, the substance will not harden sufficiently, and if neither wax nor tallow are employed, it will be too dry and brittle. The corks and a quarter of an inch of the bottle necks are dipped in this substance while it is hot, and then set by to cool.

When the bottles are corked and waxed, they should be placed in a perfectly horizontal position, so that the cork be always in contact with the liquid. The soil on which the bottles lie should be first beaten very firm; laths should be placed between each tier of bottles, and a bed of sand should lie in the interstices in each tier, and cover the bottles, for sand, though not commonly adopted, has great advantages. Piles a yard in high, the ends of the piles confined by wooden posts, are better situated than when the bottles are placed touching the cellar walls, or in bins.

It is during the secondary fermentation, and the consequent deposition, that wines are

apt to become acid in the wood; and what is called the insensible fermentation in the bottle is a state in which it has the same tendency. If the fermentation be once perfected, and the tartarous and saccharine principle be completely developed, the wine being supposed to possess the just balance, it will be proof against change from any common cause for a long period of time, as may be supposed the case with hock.

Where the sugar predominates, alcohol sufficient is produced to insure durability; but neither of these contingencies, it is probable, accompanies the cellaring of the finer and more delicate wines, which will not keep at most more than twenty years. It is in vain that the impurities are cleared away by racking; the cause of the evil still remains, perhaps, in the very delicacy itself.

The precipitation of wine in bottle is only the continuance of that which began in the vat, and keeping this in mind the remedy is apparent. All wines deposit in this their last state of preservation, from the coarse crust of Port to the depot pierre of Champagne, or the almost invisible sediment in some other wines; these consist in tartar, coloring matter, and, in white wines, super-tartrate of potash. Some substances are observed in particular wines which have too much levity to sink, and always remain in suspension while the wine is acquiring age.—This substance, burned, is found to be pure potash. The same wine will often deposit under two different forms, in the same bottle. In Campaigne, what is called the depot pierre, is like very fine sand, or small flinty crystals; but it is nothing more than an appearance put on by the crystalized tartar of the wine. This substance is found in every vinous precipitation in some form or another, more or less apparent. The wines which deposit most, are observed to be most durable. Those wines which deposit much should be decanted into fresh bottles, in case of removal, or the deposit may ascend and injure the wine. . . . The casks should be filled monthly, to make up for the loss by evaporation, or moldiness will cover the surface of the wine, and spoil it. Racking should be performed in the most careful manner, so as not to agitate the wine more than can possibly be avoided; and for this purpose, in the more delicate wines, a tube should be used, to prevent, as much as pos-

sible, all contact with the atmosphere It is evident that the preservation and melioration of wine in the bottle depend upon its maturity in the wood, and upon the utmost possible freedom from all substances it may hold in suspension while so situated. The time for this operation differs with the character of the wine. The first class of the more delicate Burgundies should be bottled at the end of a year after the vintage, while the more generous and higher colored should remain in wood four or five years, such as Pomard Vosnes, or Chambertin; Bordeaux may mellow in wood for ten years; white wine may be bottled for the most part earlier than red, and so may the Muscadines. The Rhine wines may remain in wood for many years—so may most of the southern dry wines; the effervescent wines, on the other hand, require to be bottled early. A clear, dry, cool atmosphere, with a northerly wind, after a racking within the preceding six or eight months, so that perfect limpidity be obtained, is the best time for putting any wine in bottle. The early part of the month of March is the time preferable to any other.

A great object in the preservation of wines in the cellar is to keep the bouquet as long as possible, with that agreeable aroma which marks the highest class of wines, rarely met with save in those of France. This is the characteristic of the fine wines, and in some degree of all wines of the first quality, which are pure, though in the secondary sorts it is less perceptible. Wines lose their bouquet by being kept too long. There is a middle age—a maturity of years, so to speak—equally removed from the extremes of youth and senility, in which the finer wines should, if possible, be drunk. When they lose any thing of their virtues or good qualities, it is certain that this maturity is past, although the wine may keep good for a long while—perhaps for many future years. It is an error caught up by the notion that old axioms are indiscriminately correct—it is an error, to suppose that the wine which will keep long should only be drunk when it will keep no longer; mere age is no criterion of the excellence of wine, though a certain age is necessary to carry it to the state when it is best for the table. Wines differ in the quality of endurance, and proportionably in the time requisite for improvement. Burgundy, of the first class, it is an acknowledged fact, will

support itself to twenty years, but after twelve or fourteen it does not in the least improve, and the third year in bottle or the sixth from the vintage, is the time when it is most perfect in every good quality for which the wine is famed.

The characteristic bouquet of the finest and best wines can not be transferred, because the delicacy can not be imitated, and both accompany each other. A taste may easily be imparted to wine by artificial means, but this can not deceive the palate well acquainted with what is genuine. Age softens what the French call the *seve* of the finer wines, or the spirituous aroma, but it is often fatal to the bouquet; to preserve both perfect, the best method is to take care that the casks are kept well filled with wine of the same vineyard and quality, to bottle it at the exact time, and only to remove it for the table. The finer wines will not bear any mixture, and the barrels should be kept filled by putting in pebbles well washed and dried in the sun, rather than by the introduction of any species of wine, or any but that of the same vineyard and spot of the vineyard to which the growth belongs.—*Redding on the Vine.*

The Mode of Making a Vineyard.

I WILL offer some hints on the manner of starting the grape vine from the cutting, and also some remarks on the management and after-culture of this valuable plant, so easily raised, and yet so little understood by many who would willingly go to the necessary expense for such a cheap and valuable luxury.

The vine comes in bearing sooner, and, with proper management, will last as long as an orchard of apples, and perhaps longer. The after-culture is but little more expensive than corn, as it may be mostly done with a cultivator and plow. I would recommend to farmers who do not wish to make wine-growing a business, but who would like to have an abundance of fruit for family use, and to put up from two to three barrels of wine per year, to plant near the house one-half acre in Catawba grapes.—They are the best—the very best—both for fruit and wine. The wine is as easily made as cider, and requires the same sort of management; that is, when it is fermented, rack

or draw it off into a clean, sweet cask ; sometimes it requires two rackings, but not often. The average yield is about three hundred gallons to the acre. There have been instances of three times that amount ; but from the best information which I can obtain, three hundred gallons to the acre is about the average thus far. But more on wine-making, when the directions for raising the vines are completed.

First, if you prefer buying roots two years old to waiting that time for cuttings to come forward, you can do so ; but the expense is much greater—the roots cost from \$5 00 to \$10 00 per 100, the cuttings from \$3 00 to \$5 00 per 1000, a very considerable difference, [now much reduced, say \$3 00 for two year old vines, and \$2 00 per 1000 for cuttings.]

If you purchase roots, you will find hereafter directions for planting ; if cuttings, proceed as follows : When your cuttings arrive, if they are purchased in this market, they will be put up in bundles of five hundred each, closely bound with osiers ; take them and smear them with a mixture of one-half fresh cow-dung and clay, mixed with water to about the consistence of white-wash ; have enough, so that the parcels can be dipped into the mixture, that it may penetrate the bundle and wet every cutting ; then bury them lightly under ground until it is time to plant them out in rows, where they are to stand two years.

To prepare the ground for planting, select the richest spot of good loam in your garden, and spade it well, breaking all lumps, and making the bed fine.

The amount of ground required will be sixty-two feet by sixteen, or about thirty-two feet square, for two thousand cuttings. When the bed is prepared, begin on one side and open a trench, sloping it toward the center of the bed about forty-five degrees, and so deep that the cuttings, when laid in, shall just reach from bottom to top ; then take one bundle of cuttings at a time from the ground, and open and separate them carefully one from another, so as not to rub off any of the buds that may be swelled ; then with a sharp knife cut off the wood that projects above and below the bud at each end—cut it close, but do not injure the bud ; then lay your cuttings into the trench, with the tops even with the ground,

four inches apart, or three to a foot. When the trench is filled in this way, lay off your line eighteen inches from the top of the first trench ; then open another, beating the earth very fine, and putting it on the cuttings in the first trench, and cover the top bud one-half inch deep with fine earth ; proceed with the second and all the succeeding trenches in the same way until all the cuttings are planted ; they will come up soon enough, and send up shoots that the sun will not injure ; but if the top of the cutting is above ground it will be injured, and I think this, in many cases, is the cause of the death of the plants.

I used to plant my cuttings one to two buds above ground ; I planted one thousand one year, and five thousand the next, with very uniform results. I lost nine-tenths of them. Last year I planted ten thousand, all under ground, and I estimate I have now eight thousand good plants ; and last year was very unfavorable, on account of the drouth. I would remark, that about two weeks after planting the cuttings, it is advisable to go over and examine them, and loosen up the soil immediately over the starting buds ; this must be by hand, as any implement would break off the young and tender shoot ; if the surface is the least baked, the shoot can not find its way out, but will need help.

The first year all that will be necessary is, to keep the rows clear of weeds, and in the fall, about November, cut the plants down to two buds, and then throw over all a covering of well rotted manure. The next spring, go along the rows, and clear away the manure from the plants, that they may have no obstructions to starting ; the strongest of them may be permitted to grow two shoots, but from the weak ones rub off all but one ; this is all the care they want this summer, except keeping them clear of weeds.

The next spring, when they are ready for the vineyard, (the ground for which should have been prepared the year before,) select a half acre near the house ; a rolling piece of ground is the most convenient ; a side hill is good. The kind of exposure is of but little consequence ; I would prefer any other to a steep, south side-hill.


We will suppose the half acre near the house is moderately level ; apply to that the year before the vines are to be planted,

twenty-five or thirty loads of good barnyard manure, and plant it in potatoes; get the crop off early, then take the largest plow you can get and put it in beam deep, follow that with another plow, or what is better, a subsoil plow.

Work the land eighteen inches deep, if possible; let it lie and freeze through the winter; then, as early as you can work it in the spring, give it another plowing of the same kind, and harrow the surface smooth; then take a line long enough to reach the length of the piece, and stretch it across one side, make a measuring stick three feet long, begin at one end and dig a hole about one and a half feet square and the same depth, have a stake four feet long and drive it down near the side of the hole and just touching the line; then fill the side of the hole next the stake to the top, letting the loose earth slope to the bottom on the opposite side, take your vine and cut it down to within two buds of the ground, and lay it on this sloping side of the hole with the top against the stake; then return the rest of the earth, covering the roots of the vine, being careful to pulverize the lumps, press it down with the foot, and when the vine is thus planted, lay your measure against the stake, and the end of the measure will be the place for the edge of the next hole; proceed in this way until the row is finished; then lay the line for the next row, six feet from the first, and proceed as before in planting; thus the vines will stand three feet by six.

The first year, beets, mangel-wurzel, or carrots, can be grown between the rows; but after that time it is best to leave the ground clear for the operation of the cultivator, small plow, or harrow. The plant should be kept clear of weeds, and as the vines grow they should be tied up to the stakes.

JULIUS BRACE.

 This article was originally written for the Ohio Cultivator, in which paper it was printed in 1846. The views of wine-growers have changed somewhat since, in some particulars, as continued observations and experiments have added to the stock of general experience. But as some of the suggestions were original and many of them

excellent, though not yet generally adopted, the article, with some modifications, is reproduced.—Ed.

Vineyard Calendar for May.

A "thrifty" vigneron will tell you to go to sleep in May. If you have been active, you will have trimmed, and tied and dug your vineyard over ere now, and what more would you do in May? If this be thrift, give us unthrift. True, as already recommended, the vines must have been trimmed and tied—and, according to the majority, the ground should have been worked over; but there is still much to do in the month of May, if proper attention is exercised, and right care is bestowed.

Rubbing Out.—The vigor of our vines forces an exuberant growth of the buds; three and more often break out from each joint; all but one—the strongest—should be rubbed off before they exhaust the vine too much. This should be done so soon as the promise of fruit is sufficiently developed to be a guide in thinning.

Pinching-in, and Tying.—It will very soon be discovered that the topmost eyes or buds, having started earlier than the others, and receiving the greatest flow of sap, will be taking the lead, at the expense of their followers. This must not be allowed, and is to be counteracted by pinching off their points, but not too closely—leave two or three of the young leaves beyond the last bunch of grape buds, or "seed," as they are called.

At the same time, these and all the shoots that are growing freely, should be tied to the stake with dampened rye straws, to secure them from injury by wind, as they are very easily torn away. If the wine trellis be used, no ties are necessary, but those provided by nature in the vine itself; the young branch is gently turned around a wire

in such a way that its own elasticity preserves its position until the tendril has time to clasp the wire. Another plan is occasionally adopted, to save a long shoot, when the vine-dresser does not happen to be provided with suitable ties—it is, to cut an oblique slit on one corner of the stake, and insert the tendril, which thus secures the vine.

Cultivation.—Supposing that the ground has all been dug over, little hoeing is needed in this month, unless a crop of weeds appears, in which case they must be destroyed. But some of our American vine-dressers, less *thrifty* than most of their German neighbors, have neglected dressing their ground in April. Carelessness and neglect are bad elements; but good may come of their neglect; we may discover some new and better rules of practice by their carelessness.

Some of them, too, may have a reason for their tardiness. One says that he finds his vines not dug until May do not start their buds so early as those which have been worked earlier—he thus escapes the danger of late frosts.

Another says, that, being a farmer, he has other crops to see after at that very season, and he prefers waiting until they are all planted, as by this time he has a fine tall crop of green weeds to plow in, to feed his grapes; and as he has planted on a gentle slope, and had forethought to set his vines three by six feet apart, there is plenty of room for old Dobbin and a keen plow to pass along the rows, throwing out a furrow from the grapes, covering up a fine bed of green manure, which will be nicely prepared for plowing back to the rows when the next tilling is required; his sharp hoes follow, and complete the destruction of the weeds.

The first week of May is recommended by the committee as a good time to work

the ground; the objects to be attained are, loosening the soil for the admission of heat and air to the roots, and also the destruction of weeds. The objection to working the soil earlier, is the danger that might be incurred of inducing the vines to break too soon.

A cold, wet soil, needing heat, requires more working than one which is lighter. On hills and dry places, where the rocks approach the surface, less working will suffice. On heavy soils the process needs to be repeated, if the rains have again closed the surface.

The nurseries and young vineyards should be stirred frequently, say every month, and kept clean.

Manures.—This season is recommended for the application of ashes to the vines at the time of their cultivation. We have already alluded to special manures. We shall recur to the application of potash in different forms.

Insects.—The good vine-dresser will, at all times, keep a sharp look out for intruders into his domain, whether they be biped, quadruped, or hexapod; but especially during this month will he be exceedingly observant of the latter class of insects, as they may do incalculable mischief before he is aware of their presence; and he needs to study something of entomology, in its practical at least, to understand the best tactics to be pursued in contending with a numerous and subtle foe. For the aid of all, it were well to have an entomologist employed to observe all the insects that infest the vine. In the absence of such a person, vine-dressers are requested to secure several of each sort of fly, worm, or beetle they may find, and bring them in little phials to R. Buchanan, L. Rehfuss, or other member of the committee, by whom they can be studied, and their *merits* reported on..

The Garden.

Culture of the Camellia.

THE *Camellia japonica*, when properly cultivated, is certainly the most magnificent parlor and greenhouse plant in cultivation, and no collection of plants, however small, should be without it. The great beauty of the plant at all times, adds much to its value. Unlike many plants, the *Camellia* is interesting at every season of the year. The richness and beauty of its foliage, and the general habit of the plant, mark it at once as being worthy of particular attention.

A few pots of healthy *Camellias*, are always objects of pleasure and gratification to the lover of plants. It is a matter of regret that we do not find it more generally cultivated. This I attribute to the opinion most people have, that the *Camellia* is very difficult to cultivate and that it requires a great deal of care and attention, and withal, that it is very tender, and that a slight frost will kill it. Now, to a certain extent, the very reverse of this is the case. That to grow the *Camellia* in perfection requires care and attention, I will admit; and what plant does not? But I am not aware that it requires more than any other ordinary green-house plant. To cultivate the *Camellia* successfully, requires a congenial soil, judicious watering, proper location and atmosphere.

Soil.—The best soil I have found for the *Camellia*, is one that will hold moisture tolerably well, without becoming too wet and clammy, and souring after it has been watered some time. It is rather difficult to say exactly what such a soil is, or what materials will compose it. It is very easy to say, so many parts loam, sand, leaf-mold, and the like, but that does not always give the required compound. It might do very well if all loams, sands, etc., were alike in texture

and composition; but they differ so exceedingly in different locations, even in the same immediate vicinity, that it is difficult to give the exact proportion of each to be used. To a practical gardener, this is all easy enough to be understood, but to one unaccustomed to handling soil, it is not so easy an affair.

I have sometimes seen strange looking mixtures used for plants, that have been composed according to some excellent gardener's directions, or taken from some good author. But the operator did not comprehend exactly what was meant by so much "good sound loam, sharp sand," etc. I believe more failures are attributable to this fact alone, than any other cause whatever. The best way to ascertain the peculiar texture of a soil is by feeling with the hand. A good loam should feel soft and fine to the touch, and if moderately dry, on being rubbed through the hand, it should divide into fine particles. Some loam, on being rubbed through the hand, will roll up into little balls, or will roll off into hard flakes. Such soil should at once be rejected for the *Camellia*. The color, too, is some criterion to go by in choosing soil for the *Camellia*. The best loam is brownish, inclining to red rather than yellow. Avoid a loam of a grayish or ashy hue, as such a soil is not good.

When you have found such a loam as above recommended, take two or three inches of the top, with the grass, and lay it up in a heap until the sod becomes rotten, then turn the whole over, breaking it up fine, and expose it to the action of the atmosphere at least a year before using, and turn it over two or three times in the mean while. When you have a good mellow loam well prepared, you have the principal thing requisite for growing the *Camellia*.

If you have, or can obtain, some good Jersey peat, it is very beneficial. But if you have none, you can make a very good compost without it by substituting leaf-mold. But in no case substitute any of the black boggy soils that are found in this vicinity, and by some called peat. They are very different in their nature from true peat, and are worse than useless, at least so far as my experience goes, I have found them so. I have been experimenting with soils of this description from different sections of the country, for ten or eleven years, and I have never yet succeeded, even tolerably well with them.

Having procured a good loam, take of it three parts, one part peat, if you have it; half of one part clean sharp sand, not very coarse, nor yet too fine. If you have no peat, use instead, leaf-mold one part, sand one part, loam three parts; the leaf-mold should be well decayed, and made fine, but not so much decomposed as to lose its leafy character. It should also be as clear from rotten wood bark, and the like, as possible.

The best time to pot the Camellia is in October, or in the spring, just after they have done flowering, and before they have commenced making young wood. Of the two seasons, I should prefer waiting until the fall, unless your plants need potting very much. Never touch them when they are making their summer growth—be careful not to overpot them, one size larger pot than they were in is sufficient, unless the roots are very much matted, in that case you may use two sizes larger; if the roots are bad, and have decayed on the outside of the ball, (which is too apt to be the case with plants that have been badly managed) remove the earth, and cut away the bad roots, until you come to sound wood, and put the plant into a small pot. When they are planted, give them just water enough to wet the whole through, then water

sparingly for two or three weeks, until the soil becomes settled in the pots.

The best location for the Camellia in the summer is some sheltered and shady location, where they can get a good free circulation of air, but are not exposed to a current, or harsh dry wind; if you have not such a location you can easily provide a place that will answer very well, by putting a few stakes in the ground, and two or three sticks across them of sufficient height to contain your plants, over which throw a slight awning of cheap unbleached muslin, or something of that kind that will be thin, so as to admit the light, and exclude the sun from them; a board put up around the outside of the pots, will protect them very much, as it prevents a current of air drying the outside. It is also a good plan to plunge the pots into something,—old tan-bark is an excellent substance for that purpose.

In watering the Camellia, be careful not to give too much, as that will rot the roots; nor allow them to get dry, as in that case they will also perish, but from a different cause. In the summer the plants should be syringed, or sprinkled overhead with a water-pot two or three times a week, when the weather is dry; in showery or damp weather this may be omitted.

In the latter part of September or beginning of October, the plants should be removed to their winter quarters. Before taking them in, look carefully over them and see that the pots have no worms in them, as they destroy the texture of the soil and injure the plants very much. If they do contain worms, you will easily discover them by the appearance of the earth on the top of the pots; they may be expelled by turning the plant out of the pot carefully, without disturbing the ball. The worms may generally be seen on the outside of the ball, and can be easily removed.

If the leaves are, dirty, or if any red spider or other insects are about them, sponge them off, or give them a good syringing.

Camellias can be kept very well through the winter in a pit, and will stand several degrees of frost without injury, if they are kept at a regular temperature; they may now be gradually exposed to the light, as they bloom better by being allowed some sun in the winter. If your plants are kept in a room, give them as much light as possible, and keep them at as regular a temperature as you can; about fifty degrees is a good range to keep them at, if you want flowers in winter, but if you wish to keep them back till spring, a much lower temperature through the winter will preserve them.

Camellias kept in rooms, should often have the leaves sprinkled, and the earth in pots should be kept moderately moist, but be careful not to over-water them at this time of year, for when a plant gets too much in the winter, it takes a long time to dry, and the roots are liable to become rotten; the other extreme, that of being kept too dry, will cause them to lose their flower buds, and the young roots on the outside of the ball, that come in contact with the sides of the pots, will be injured. The air in the room should be kept as moist as it conveniently can.

It has often been a matter of surprise to me that the amateurs of the Camellia have not used Wardian glass cases in which to grow them. In rooms, Camellias could be grown in the greatest perfection, by adopting this mode; the plants could be kept at a more regular temperature of heat and moisture, free from dust, and the pernicious effects of a dry and over-heated atmosphere. By placing a pan of water in a glass case, the atmosphere could always be kept moister than that of an ordinary sit-

ting room. I can not conceive a more interesting object to a lover of plants than a fine case of Camellias in winter, especially to a lady amateur.

When the plants have done flowering and are making their growth, they should be kept at a little higher temperature than when in bloom; they should be frequently sprinkled or syringed and kept moderately close and moist. When they have made their growth and the young leaves and wood have become somewhat hardened, they may be more fully exposed, and if the weather permit, put them in summer quarters and manage as before directed. By attending to the above simple directions the Camellia can be grown as easily as a Monthly Rose or a Geranium. JOHN SAYERS.

Cottage Garden, March, 1852.

The Fuchsia.

THE term "florists' flowers" has been defined as any species of flower that has been hybridized, and the size, color and form thereby permanently improved. That this improvement has taken place with the Fuchsia is manifestly true. We perfectly remember the delight with which we first cultivated the original species, *F. coccinea*—how anxiously its first blossoms were waited for, and the pleasure they afforded when their scarlet sepals and purple corollas expanded to the view. This species is now very rare, so much so, that the present generation of fuchsia growers would scarcely recognize it, and would not think it worth growing. The story, and we believe the true one, of its introduction by a sailor bringing it to his mother, who lived somewhere in Wapping, and in whose cottage window it bloomed for the first time in Britain, if not in Europe; and of its being observed in that situation by the late Mr. Lee, who emptied his pocket of all its contents as its purchase price, to the astonishment of the old lady, who, with some difficulty, even for such golden considerations, was tempted to part with it, has appeared in print before, but we forget where; and it will, no doubt, raise a smile on the face of such men as

Smith, Storey, and others, who have brought the fuchsia to its present state of almost perfection, according to our present ideas.

PROPAGATION, by Seed.—The great use of raising fuchsias from seed is to improve upon the varieties we at present possess. Now, in order to accomplish the end aimed at, it is necessary to adopt such methods as experience tells us have been successfully followed to produce that end. If we wish to improve the form of any flower capable of being so improved, we must save the seed from such as possess the best form at present in existence. If the color, or colors, are to be improved, the pollen of some variety that comes nearest to the desired color, should be placed upon the stigma of one that has the same desirable color also. Again, if size is the object, the largest flowered, with the proper color, should be the female parent, hybridized with pollen from another variety, with as large flowers as are in existence. The fine fuchsia named *spectabilis*, is one very likely to afford pollen that will materially increase the size of our present race of fuchsias. Though shy to flower, yet, by applying its pollen to a more freely flowering variety, no doubt a progeny would be raised as prolific in bloom as any already in existence. The seed thus raised by cross impregnation should be carefully gathered when ripe. As the seeds are enveloped in a pulp, it is necessary, in order to preserve it, to cleanse it effectually. This is easily done by washing; bruise the berries with the hand, and mix them with water; as soon as the pulp is all washed off, pass the liquor through a hair sieve fine enough to catch the seed, wash it repeatedly till it is quite clear, then dry it gradually; put it up in brown paper, and keep it in a dry room till spring. Sow it early in March in light sandy loam and peat, cover lightly, and place the pots in a gentle hot-bed. When the seedlings are half an inch high, transplant them in rows across pots five inches wide; these will hold about twenty or thirty plants each, and then replace them in the hot-bed. In these pots they may remain for a month or six weeks, and then they will require potting off singly into three inch pots. Place them for a few days in a cold frame, kept pretty close and shaded until fresh roots are formed, and they are able to bear the full light, with a moderate admission of air. Give plenty of the latter as they acquire strength, and when

the pots are full of roots give another shift into four inch pots, and let them remain in these last till they flower. Many of them will flower the first year, and then is the time to make a selection, which naturally brings the consideration, of what are the desirable *properties of a first-rate fuchsia*.

Commencing with the tube, a first rate fuchsia should be well proportioned, neither too thick, nor too short, nor too long; one-and-a-half inch is a fair length, but if it is stout in proportion, two inches may be allowed; the sepals or flower cups should stand at equal distances, and should be broad at the base, gradually tapering to the end; they should be reflexed a little below the horizontal line, but not turned up so high as nearly to meet the tube; the corolla should be large and well rounded at the end, so that when the flower is turned up it may have the appearance of a little cup; the stamens and anthers at the top of them should project well out of the corolla; and the filament bearing the stigma must project considerably beyond the anthers, and should be of a clear white, so as to contrast well with the purple or crimson corolla. The colors should be clear and bright; the tube would be improved if of a waxy appearance, bright and shining. If white, that white should be pure, and not a wishy-washy, pinkish white, but clear as driven snow. The corolla should be of the deepest azure blue or purple, or if of darker color, it should be a scarlet crimson, clear and shining. Some consideration, also, must be given to the flower stalk, which should be long enough to allow each flower to be seen distinctly from among the leaves. The habit of the plant itself must be attended to; it should be rather dwarf than tall, and should produce bloom when a foot high. Take all these properties into the mind's eye, and select such out of the batch of seedlings as come quite up to the desired standard, and the rest may be either cast away or planted in the borders of the flower garden. The selected ones should be re-potted, and grown on, to the end of the season, to prove them. Cuttings may be taken off the best and propagated, and the whole kept in the coolest part of the green-house during the winter.

PROPAGATION, by Cuttings.—The best time to do this is in the early spring months; the first week in March, for instance. Previously to commencing, it will be necessary to place

the plants intended to be increased by this mode, in a gentle heat, to cause them to push forth young shoots. When these have attained two or three leaves, slip them off, and lay them to dry for a short time; and whilst that is taking place, prepare the pots to receive them. The size of the pots to be used for this purpose, should be what are called 48., measuring about four inches and a half in diameter. Let them be either quite new, or, if old, let them be washed thoroughly clean. Drain them effectually, and place either some moss or some rough siftings upon the drainage; then fill the pots with light, rich compost to within an inch of the top; fill the remainder with pure silver sand, give a little gentle watering to make them firm; let it stand a few minutes to dry, and then put in the cuttings, first smoothing the bottom of each with a sharp knife. Plant them round the edge of the pot, putting them so as to let the leaves point inwards. Remember, the cuttings can not be too short. If the stems are just inserted within the sand, and the leaf or leaves are left out of it, they will strike root all the sooner. When the pot is planted with cuttings, fill up the holes the planting stick has made with some dry, fine sand; then give a general watering with the finest rose watering-pot, and let them stand until the leaves and surface of the sand have become moderately dry, then place them either in a gentle hot-bed, or under hand-glasses, in heat; give them a change of air by tilting the lights of the frame upon the hot-bed every morning, or by lifting off the hand-lights every morning early for an hour; shade them well from the sunshine during the middle of the day, until roots are perceived to be formed; lose no time, as soon as that takes place, in potting them off in two-and-a-half inch pots. If all points of shading, watering, and giving air, have been duly attended to, roots will be formed in sixteen days from the time of putting in the cutting.

After the plants are potted off, replace them where they came from for a week or ten days, keeping them pretty close, and shaded from the sun; give very moderate waterings, only just sufficient to keep them fresh and growing. When more roots begin to show themselves, give more air and less shade, till they are enabled to bear the full light of the sun; they may then be considered and treated as established plants.

SUMMER CULTURE.—The plants struck in the spring make the finest specimens for exhibition in July. No plant can be considered a fair specimen unless it be at least four feet high, with numerous side branches; and by judicious culture, this may be accomplished easily enough the first year. We have now at Pine-Apple Place, a house sixty feet long, nearly filled with such plants, that were all cuttings this spring, and there are, no doubt, many such plants raised in the same way at other establishments.

“But how is this to be done? You have every convenience, and, no doubt, clever men to manage them.”

We will try and describe how it is done, and hope to be able to show that no great skill is necessary, nor much convenience required. The two greatest points, to succeed well in growing fuchsias for exhibition, are, constant attention, and room to grow them. When the young plants have filled their pots with roots, shift them immediately into five inch pots, in a compost of light loam, and leaf-mold, in equal parts, adding a due proportion of sand to keep it open; this will be rich enough for the first two shifts. Place them in a house heated to 55° by day, and 50° by night; let them stand pretty close to the glass, to cause a stout growth. Now is the time to determine upon the form the plants are to take when fully grown; there are two, the pyramid, and the ~~max~~ bush—we think the first the best and most elegant. To furnish side shoots it will be necessary to nip off the tops when the plants are six inches high; side-shoots will then be produced, and these should be tied out horizontally; the uppermost shoot should be tied upright, to be stopped again when eight or nine inches have been added to its stature. By the time this has taken place, a fresh shift will be necessary; the diameter of the pot this time should be seven inches. This shift should take place about the middle of April. Replace them in the house again, as near the glass as their shoots will allow. Give them now every attention, to cause strong, quick development, by watering freely at the roots, by syringing them overhead morning and evening, especially in sunny weather, and shutting up early in the afternoon, at the time the syringing is done; this will create a most stimulating atmosphere, and

the plants will show they are thankful for such care by growing fast, and producing broad, healthy foliage. Stop them again, and tie the side shoots out in such a way as will furnish every side of the plant with horizontal branches equally distributed. If the house is a lean-to, it will be necessary to turn the plant round every three or four days, to cause every side to be well proportioned and equally furnished; but if the house is in the best form, a span roof, this trouble will be avoided. Continue this training till the plants have attained the requisite height, and begin to show bloom; the supports should now be removed, and the branches will then droop downwards in that elegant manner for which this tribe is so much admired. Re-pot twice more, first into nine inch pots in May, and into eleven inch pots in June. In this last size they may be allowed to flower, and they will be perfect specimens of elegance and beauty. They should then be removed into the greenhouse, and have abundance of air night and day. They will adorn the greenhouse when there are few others of its proper inhabitants within, as they have been now set out of doors to enjoy the summer breeze.

Cottage Gardener.

T. APPLEBY.

Fuchsia Carolina.

Mr. Pince, of the Exotic Nursery, having obligingly corrected an error I have made regarding the parentage of this truly fine variety, I am enabled to give you its pedigree with confidence. It was raised from seed of *Exoniensis*, fertilized by F. Montann, not Rudicans, which Mr. Pince considers would have produced a *coarse* race. *Exoniensis* being a hybrid from *F. Cordifolia*, fertilized by *Glebosa*, the progeny of which we write, is a descendant of many noble ancestors; in it all their merits are united.—*Id.*

Planting out in Pots.

THIS, so far as I recollect, was the mode employed when first the plants of the greenhouse were made subservient to flower garden decoration. Gaps formed from the cutting down of herbaceous plants out of bloom, were supplied with pots of myrtle, geraniums, calceolarias, etc., which were again to be taken up and replaced in snug quarters before the frost came. The beauty which

plants presented singly, gave rise to the idea of combining them in groups, and thus changed the whole style of flower gardening. When first attempted, so far as I can judge from recollection and experience, the system described by Mr. Beaton, as adopted by Mr. McIntosh, was almost entirely followed. In low situations, much north of the Firth, in Scotland, it is the only plan that can be adopted with success, in the case of all the finer and tenderer plants, whether used for the flower garden or balcony. The late spring, and the early autumn fogs and frosts, give less time for growth than in the south, and there is even, during the summer, a greater disposition to the production of leaves than flowers. I found from several first-rate gardeners, that the change of the seasons had been so great within a few years, that unless with the hardier plants, they could do little with the grouping system. Here in the south, the vast numbers employed would render pots a serious consideration, and the room necessary for wintering them still more so. In the case of our balcony friends, these are matters of less moment. Both for inside and outside of the window, I have previously recommended grouping the plants in baskets and vases, instead of exhibiting them singly in pots; and I would like, if I could, to tell whether it was preferable to turn out plants into baskets or vases, or to plunge them in, or at least cover them over with green moss. Each method has its advantages and counterpoising disadvantages. By planting out you save trouble and watering—by keeping in pots, you can easily remove an exhausted decaying plant without disarranging the others. When the basket or vase is small, to obtain the greatest maximum of success at the least minimum of trouble, I would recommend to plant in the basket or vase. When the basket, or vase, or box, is large, say three or four feet in diameter, or as much in the square, the most successful mode will depend, first, upon the plant employed, and secondly, upon the character of the season. For instance, plants that require free growth to bloom freely, such as most of the shrubby calceolarias, will thrive best if planted out. On the other hand, plants whose free flowering depends in some measure upon checking their luxuriance, such as most of the succulent geraniums, will succeed better in pots, but will require more

water, unless plunged firmly in moss, or any other absorbing-of-moisture substance. Then again, in a dry bright summer, whether in beds, or boxes, these plants will do well planted out; while in dull and damp seasons, the more cramped they are at the roots the better. As a whole, then, even for beds on a balcony, planting out will save trouble in watering, but if the soil is very rich, or the plants are free growing and succulent, or the season should be dull and drizzling, you will have to check luxuriance by cutting the roots, by inserting a sharp knife into the soil at a few inches distance, less or more, from its collar, and according to the size of the plant, cutting half-way round at a time; or, what would be profitable for the uninitiated, removing a considerable portion of the larger succulent leaves, and any unnecessary young shoots. The latter is quite as effectual for checking luxuriance and inducing a flowering habit, as the former. I first learned this notch, many years ago, by seeing a very low wall, under the care of Mr. Caie, at Bedford Lodge, so smothered with the bloom of the common nasturtium, that scarcely a green leaf was to be seen. Such wholesale disleafing would be ruin to many plants, but in the case of those with succulent herbaceous stems, and growing rather freely, the operation resorted to in moderation, checks luxuriance, and promotes flowering. I have been obliged to remove leaves pretty freely from vases of scarlet geraniums this season, though planted in soil none of the richest. One advantage of turning out the plants in pots, in the case of those who do not grow on a fresh stock, is, that the plants are more easily kept afterward than if taken up out of the soil and repotted. Where a pot or vase of the scarlet geranium exists, and the plants have been planted out and the vase can be dispensed with during the winter, the best mode of all is to place vase, geranium and all, into some snug, out-of-the-way, dry corner, where frost will not reach them; and provided the surface of the soil is covered with something to prevent its being thoroughly dry, never think of slaking their thirst until the stem begins to bud afresh, as spring again comes round. In all such cases, preventing the drying of the soil is much preferable to any watering at all in winter. Whether planted out or plunged out, we hope that before long, small numerous

red pots will be banished from balconies and the fronts of mansions. Sometimes we come upon beautiful gardens, everything managed well, a magnificent mansion, splendid groups of beds over a lawn at no great distance from the doors or windows, while, as a burlesque upon the whole, by the unseemly contrast between the grand and the lowly, there is a little heap of small plants in small pots, clustered together at the entrance, or what is more unseemly still, elevated and stilted upon a little green painted stage in a similar place, constructed for their special reception.

FAILURES.—*Salvia Patens*.—I have several times spoken of these in the admiring strain, for specimens and beds. As a blue we have got nothing to equal it; and though the individual flowers are of no long duration, there is such a succession of them, that the plants generally present a furnished appearance. My specimen plants have not been so good this season as usual, though until the other day, they have been very fair, from the beginning of June, with no more trouble than cutting away the exhausted spikes, and giving several surface dressings with old cow dung, etc. But those in beds have completely disappointed me, though heretofore they have always constituted a good and prominent feature. Day by day they have continued to wither and dry, or shrivel up, though from no want of moisture. Old plants and young plants have gone just alike, and what is very tantalizing, only one or two at a time. A plant would be flourishing one day, the next the flowers all drooping, its leaves all yellow, yet nothing seemed the matter with the roots. The plants have been treated in every respect as formerly, and they are planted in similar soil, though not in the same place as last year. There is only one thing I can think of. In July they were watered with black water from a farm, but so were *Salvia fulgens*, *Calceolarias*, etc., near them, without any prejudicial effect. Much as I like this salvia, I am somewhat doubtful of placing it again in such a conspicuous place, without being certified that no one else has suffered in a similar manner.

Again, *double feverfew* has several times been recommended for boxes and beds. It is very pure white, very double, the flowers almost the size of half crowns, and produced in great abundance. For several seasons I

have had it splendid from towards the end of June to the end of October; but this season a majority of the flowers were browned before the end of August, and so simultaneous was the change, that thinning out the discolored flowers was like washing a black-smoor white. They are now scarcely passable after considerable patchwork. Now I mention this failure, because I think I can prescribe the remedy. I formerly used young plants, this season a great proportion were old plants divided. It generally stands the winter with little or no protection; when a splendid bed, therefore, is desired, cuttings should be placed in a gentle heat in the end of March or the beginning of April. They strike fast, and pricked out and hardened off may be planted out in the beginning of May; previous experience would lead me to say that such plants would keep on until at least the middle of October. In the neighborhood of London where a white flower is desirable, old plants divided should be used, and they will bloom brilliantly until the middle of August, or thereabout. If it were wished to continue the bed, young plants should be struck in the middle or end of April, planted out into fairish soil, and lifted and transplanted when the older plants were removed: with its fibrous roots it may be moved at almost any time.

R. FIAN.

Cottage Gardener.

The Spading-Fork.

In the tasteful and proper cultivation of the garden, the Spud, or as we prefer to call it, the Spading-Fork, is an indispensable implement. No one, of any considerable taste, now thinks of plowing a garden. Nor is the common spade adapted to the purpose of preparing the soil of the garden. It does well in stiff grounds, and can not well be dispensed with; but is too heavy for convenience, and unless great pains are taken to break and pulverize the lumps, will leave the ground in a bad condition. A spading-fork, rightly made, will perform nearly twice the amount of work, with a much less outlay of strength, and do the business altogether better than the spade. And as we consider a good kitchen garden of great importance to every farmer and mechanic, an attempt will be made to describe the implement referred to.

The best article of the kind which we have ever noticed, was manufactured in Chataque

Co., N. Y. It is of cast, or German steel, spring-tamped and smoothly finished. The tines are about the length of a common spade, four in number, slightly curved, and exactly parallel. The points are lancet shaped, and the tines, becoming thicker toward the handle, are about five-eighths of an inch wide. The handle is like that of the shovel, but somewhat longer. Spading-forks of this kind can be bought for ten and twelve shillings at retail, and we hope that a supply will be obtained by our hardware dealers by the opening of the season. Articles intended for this purpose can now be obtained at some of the agricultural warehouses in this city, but they are decidedly inferior to the kind above described. And we are quite sure that those interested in such matters, will find their account in obtaining and using implements of the right sort.—*Ohio Farmer.*

Japanese Gardeners.

THE gardeners of Japan display the most astonishing art. The plum-tree, which is a great favorite, is so trained and cultivated that the blossoms are as large as those of dahlias. Their great triumph, however, is to bring both plants and trees into the compass of the little garden attached to the houses in the cities. With this view, they have gradually succeeded in dwarfing the fig, plum and cherry-trees, and the vine, to a stature so diminutive as scarcely to be credited by an European; and yet these dwarf trees are covered with blossoms and leaves. Some of the gardens resemble pictures in which nature is skillfully modeled in miniature—but it is living nature! Maylan whose work on Japan was published in Amsterdam in 1830, states that in 1826 the Dutch agent of commerce at Nagasaki was offered "a snuff-box, one inch in thickness and three inches high, in which grew a fig-tree, a bamboo and a plum-tree in bloom."

The expedition fitted out by our government, to restore to this wonderful island a few of its shipwrecked mariners, will, it is hoped, enable us to obtain some further insight into its hidden mysteries than have yet been revealed to Yankee eyes. Who knows what may be the power of kindness in opening their closed ports, and soothing their savage breasts? The botanical results which must follow will be delightful.—*Es.*

Culture of *Asparagus officinalis*.***Discussion at the Cin. Horticultural Society.***

THE President opened the subject by reading the following paper, which he had published in the *Ohio Cultivator*, in 1849:

How to Grow Asparagus:

WITHIN the last few years, I have heard much complaint of the quality of the asparagus sold in the Cincinnati market. Its appearance, as tied up in bunches and exposed for sale, is exceedingly beautiful and inviting to the eye of the epicure, and has commanded a ready sale at high prices. The thick, long, white stalks, with only a short tip of green at the ends, has led to the supposition that it was exquisitely tender and delicious—but on the contrary, when cooked and served up on the table, it is almost invariably found to be hard, stringy and insipid. These defects so much complained of, have been by some erroneously attributed to the climate, whilst all the fault lies in the cultivation.

Among all the productions of the garden, I know of none more abused, or cultivated with so little regard to horticultural skill and the true principles of vegetable physiology. Errors *deeply rooted*, seem to have prevailed from time immemorial, and it would seem strongly riveted by time. The result is, one of the most delicious and wholesome vegetables, when properly treated, has been rendered almost worthless, except to sell.

I allude to the common practice, especially among market gardeners, of deep planting, whereby the crown of the root is thrust six or eight inches below the surface. Consequently it is later coming forward in the spring, and the stalks are so long in reaching the light of day, that ligneous matter is deposited in the blanched stalk by the time it has arrived at the surface, it be-

comes tough and almost woody—and the only part that can possibly be eaten is the green tip, that has been allowed to rise but an inch above the ground, when it is cut four or five inches below the surface.

With all due respect for long established customs, which should be cherished only when established in truth and science, I take the liberty to suggest to all who are fond of good asparagus, to change the practice at once. Make a good bed, well dug and manured, if trenched two feet deep so much the better, but have it well drained. In planting, never place the crown or top of the roots more than two inches below the surface, and keep them always about that depth, except in winter, when a good coat of manure will protect the plants—this may be forked in early in the season; and during spring and summer the bed should of course be kept mellow and free from weeds. When the rank stalks have shot up four or five inches above ground and acquired a greenish hue from the atmosphere and light, cut them even with the surface, never below it, as that would endanger the rising shoots—and you will have a dish of the most exquisite delicacy. No tough, stringy and woody stumps will be left upon your plate after the repast.

If you have beds already planted in the old way, go to work early in the spring, and with the hoe scrape off carefully all the earth down to the roots, then, with a fork or other instrument, loosen the ground between the plants and throw back fine dirt enough again to cover the tops of the roots about *two inches*; and cut and manage the asparagus as above directed. If at all skeptical, try the experiment on a part of your bed and I guarantee you will be satisfied with the result.

I have pursued this course for several years, and many strangers and friends who

have shared my board have solicited seeds or plants of my exquisite *kind* of asparagus.

Mr. Orange coincided with this advice, and said further, that he had applied salt with the effect of killing the weeds. He thought that the market people injured it after it was cut, by placing it in water.

Mr. Considine thought that no purchasers would be found for *green asparagus*; said that the beds should be covered with manure in the winter. Having been called on for his advice, he said that he had dug his beds deeply, manured well. He believed with Mr. Orange, that this vegetable was injured by the market people by placing it in water after cutting. He recommended planting fifteen inches deep, to blanch it for the market—not to render it better; for his own family he cut it rather green.

Mr. Bush said he had dug deeply, and planted at ten inches below the surface. He had once underdrained with stones, set his plants on them, and filled up the beds with earth. This did not succeed. He had also sown the seeds on sandy soil, and found it did well.—He thinks it will find its place. It should be cut before it is green while yet red, and cut three or four inches below; thinks it better flavored but this depends upon the taste.—He thinks it should never be set more than four inches deep; has had it one and a half inches in diameter.

Mr. Anthony stated, that for several years he had observed his uncle cutting it in its natural state on the salt marshes of Rhode Island, surrounded by the elements of moisture, heat, decaying sea-weeds, and salt water. He recommended a dressing of sea-weed, especially in winter, and *sea-water* when accessible.

Some had found that salt and brine had injured the plants.

Mr. Ernst suggested, that by planting the seed, we might ascertain the proper depth,

which would be two or three inches. Give plenty of manure, plenty of salt and a rich bottom.

The English method, furnished by W. Cox, was then read, as follows:

Preparing and Planting.—Having provided some good yard manure upon the ground, dig a trench at one side, two feet broad by eighteen inches deep; then dig up the bottom, and throw in about six inches of manure; dig other trenches in the same way till done. When done stake it out in four foot beds, leaving the same distance between each bed; draw deep drills, one foot apart; be sure and have your plants three years old, plant them in the drills one foot apart, then cover the beds all over with earth from the space between, leaving the beds smooth. You can then plant lettuce or cabbage between the beds, and keep the ground clean.

Dressing.—Cut down the plants, then give a top-dressing with some half rotten hot-bed manure, or such as will pulverize well during the winter. In the following spring throw from the alleys, (as I term them,) six inches of earth, bank up the sides, and make the bed even.

The grass should not be cut the first year, and very little the second; the third year it will be in good order. Every fall it should have the top-dressing, and, in the spring, it should be forked in, but be sure and not fork it too deeply, or you may injure the tops of the plants; throw from the alleys one spit of earth, make the beds even, and bank the sides as before; continue to do so every year.

In the course of three or four years, the alleys will get too narrow to plant with lettuce. When so deep as to be below the roots of the asparagus, fill them up with some manure—it will protect the roots in the winter.

The instrument used to cut the grass should not have a sharp edge—it should be like a key-hole saw, the teeth all one way; the saw should be about eighteen inches long; it should be thrust into the ground to the depth you want to cut the grass. The shoots should not be more than three inches above the surface of the ground, and it will have a beautiful purplish green.

Glass Culture.—Throw out a trench a foot deep, the length and breadth of your box; then wheel in some good hot manure, to the depth of eighteen inches—this manure should have been turned over two or three times; then tramp it down well, throw in six inches of earth, put on your box, and push a stick in, so as to examine the heat: you can then leave it for two or three days. Your plants should not be less than five years old, and as much older as you can get them; lay them in regular rows, according to their size, so that they will not touch one another; throw on about a foot of earth, make the surface level, and put on your sash; then bank earth on the outside, so as to keep in the heat, and in the course of three or four weeks you will have grass fit to cut. Commence making your beds in February. The roots after they are once forced, are of no more use.

Mr. Kelly observed, that there need be no apprehension as to the injury from frost. He had young plants within one inch of the surface, and they were uninjured by the cold of the past winter.

The President referred to the cultivation pursued by Dr. Flagg, who had produced the finest asparagus ever shown upon our tables, which he had cut even with the surface of the ground, according to the suggestions of Dr. Mosher.

Mr. Buchanan recommended cutting at the surface, or a little below.

Mr. Davies said he had applied salt to the

extent of one pound to the square yard; and recommended that some shoots should always be left to each crown or root, and asks when the last cutting should be made? In reply it was recommended that the middle of June, or, upon general principles depending upon the strength of the roots, not to cut too closely, or the bed will be injured for future seasons.

Mr. S. S. Jackson said he recommended young plants for setting beds, as they could be dug up without breaking the roots. He prefers white asparagus to that which has grown green by exposure to the air.

Mr. Young top-dressed, in the fall, with wood-mold mixed with old rotten manure, well composted together. He preferred this to manure alone—it does not bake.

Mr. Considine referred to Mr. Shoemaker's method of covering with tan-bark, six inches deep, and recommended it highly. It should be put on when the cutting season is over; then manure is to be applied in the fall, and the whole forked over in the spring.

Mr. Longworth recommended planting four inches below the surface, and cutting it part green and part white. This is a matter of taste, and the fashions have changed; formerly none but the "white sort" would sell—now, inquiry is made for the green sort.

Culture of Celery.—Apium Graveolens. *Discussion at the Cin. Horticultural Society.*

Mr. DAVIES advised that the seed should be sown about the second or third week of February, upon a moderate hot-bed, or in boxes of rich mold in a green-house. When the plants have put on their fourth leaf, they should be pricked out from the seed box, into a nursery, or bed of rich light mold, prepared by placing two inches of soil upon two inches of rotten manure. Being four inches apart, they can here grow vigorously, and make strong stocky plants with a fine

mat of roots—the advantage of which will be very apparent, when the time comes for planting them out in the trenches where the crop is to be grown and blanched.

About the first week of July, dig the trenches, one foot wide, one foot deep, and three feet apart; dig up the bottom soil, and upon it place fresh cow dung, to the depth of nine inches, and cover it with two inches of the richest soil. He stated that he had tried other manures, especially the rotten dung from the hotbeds, but preferred the recent cow dung to all others; and further, that it would be difficult to render the ground too rich for this vegetable.

He advised that the plants be set one foot apart in a single row, having taken them up from the nursery bed with a mass of roots holding a good ball of earth, they could be plunged into the highly manured trench without any detriment, and they would receive no check, but even grow the faster if the weather were not too dry, or if the plants received a good watering. Offsets should be removed at the time of transplanting. He has grown it by this plan to the weight of nine pounds. Celery delights in plenty of water.

He especially urged that the earthing up be not commenced too soon, the plants should have grown stout and stocky, and the weather should have become cool, or they will be likely to suffer from decay in our hot climate. The first earthing should be six inches, and the leaves should be carefully gathered while the soil is worked in around the plant with the hand. After dressings should be four inches each. He considers Celery the worst grown vegetable in our market.

Mr. Buchanan, who cultivates only for domestic use, has been very successful in the growth of this delicious vegetable—this he attributes to the richness, deep tilth,

and moisture of his garden, which has all been thoroughly trenched and abundantly manured.

He sows the seed thinly in drills in the open ground; if too thick, they are thinned out, but he never has them pricked out into another bed. They are large enough to plant in the trenches by the end of June or beginning of July. Here they are placed ten inches apart, in a double row, the trenches being four feet asunder, and well manured. He shelters the young plants and waters occasionally; never allows any earthing up until the plants are well established; begins about a month before it is wanted for use.

Mr. Kelly referred to the prize Celery of the London gardeners, many of whom took great pride in competing with one another in its production, by them it had been grown to fourteen pounds. There the ground was highly manured for this crop, and indeed he considered that too much water and manure could not well be applied to it. In earthing up, the gardeners took care to form a sort of dish of the top of the soil so as to retain the water which he had seen them apply by the barrel full—irrigating the plants *profusely*.

He advised the use of old manure in abundance, and to avoid all that is hot and fermenting.

Mr. Cox supported these views and observations—he too was familiar with London culture. He also urged the plan of pricking out recommended above, it should always be practiced, as it improves the plants exceedingly to give them room to grow, and also because they will bear removing so much better with a ball of earth.

He advised digging up the bottom of the trenches before applying the manure. Considers a single row the best for a fine product; but spoke of double rows and even

beds, as a more economical method, on account of requiring less earth to be moved for the blanching. When this plan is adopted the rows run across the bed, which may be three or four feet wide, and two pieces of thin board, reaching across and clasped at top, hold the leaves together, and allow of throwing the earth in between the cross rows without injuring the plants.

No person advocated the celebrated new-fashioned method of growing celery with tiles, which has been so highly recommended by the inventors and vendors of the apparatus in England, and even in the Eastern States.

Allusions were made to the difficulty experienced in this climate, arising from the frequent drouths of midsummer, and the advantages which attach to irrigation and proximity to water, its natural element, in such situations as the vicinity of Boston, where it is cooler, and near Philadelphia,


where it is very extensively produced in the drained marsh-land, lying between the Delaware and Schuylkill rivers.

Our own market gardeners always take off an early crop of potatoes, or some other highly manured vegetable, before setting the celery, and in this latitude the only protection given in the winter is a covering of rye straw on the top of the ridge of earth that is brought up to the top of the leaves at the last dressing, and that is, as late as the frosts permit working the soil. From this ridge it is dug for the table, as wanted during the winter.

Some discussion ensued respecting the application of salt, and its use as a manure; though it has been applied in some private gardens, hereabouts, with happy effects—they were not represented in the discussion, and appeared to have escaped the observation of the speakers.

Miscellaneous.

Thoughts in the Rough.

 A KIND correspondent has sent an article under the above title, which was written during the cold weather, and may now be a little out of season; but good advice is never *unseasonable*. Let us hope that his excellent suggestions as to study will not be thrown away, but that all will strive to keep pace with the progress of the age, and, as another writer has suggested, let every one contribute his mite to aid his fellow-travelers in the way. Let there be not only an emulation to excel, but also to aid others in attaining excellence.—ED.

SPRING with her flowers; Summer with her golden harvest; Autumn with her lus-

cious fruits, all have been here, and now we have a visit from old Winter himself, *in propria persona*. This is winter “in deed and in truth.” Thermometer, 20° to 30° below 0; but soon, almost before you are aware of it, my good old fellow, you will take *marching orders* for higher latitudes—have leave of absence; but while under your administration, let us be subject unto the “powers that be,” and learn wisdom.

Query.—Wonder if Sir John Franklin, or some of his party, have not found the North Pole and cut it down, the top falling this way, producing the late very cold weather?

If all is locked up without, it should be otherwise within doors. The passages by which knowledge and science are conveyed to

the mind, *to the man himself*, should remain always unclosed. Innumerable are the channels in which the mind can be directed, and receive both pleasure and profit. The winter is the season in which the horticulturist should be "on his taps," *mentally*, as much or more than at any other time. It is particularly favorable for performing all of the necessary wind-work; taking in a good supply of ballast, in the shape of chemical knowledge, and all the other *et ceteras*, to be expended *practically* during the coming season.

How little, oh, how little, does man know of himself, and that which he should know; "treading in the way our fathers trod,"—"skinning in the way our fathers skinned;" and, as Alexander wept because there was not another world to conquer, why should not we, as a nation, weep, after this continent has been fairly skinned, (which at the present rate it would not take long to do) because another is not at hand, that we might commence the same inhuman, demoralizing, and unrighteous process?

Occasionally a ray of hope will break through the blackness of darkness—a star here and there appears, to guide the traveler in the way of truth; but how much remains yet to be done! The fact is, man needs knowledge—education—in the things which concern him here and now. Not in dead thought, of dead languages and dead nations, but in "thoughts that breathe," and words that shall burn, until he may be awakened to the great practical duties of life.

One command to Adam was to *dress* the earth; but judging from the practice of his descendants, one would suppose it to be to *un-dress* it.

Brethren! let it not be said, that we, year after year, violate this command; but let us face about, and instead of undressing the earth—taking off its skin—let us **DRESS IT**; aye, clothe it with beauty, by adorning the

homestead, rendering it attractive, our fields richer and more productive, our orchards laden with luscious fruits, the reward of our labors, our gardens fruitful in healthful vegetables, and rich in gorgeous and lovely flowers.

Plow-Boy.

Grand Vegetable Banquet to the Potato, ON HIS LATE RECOVERY.

THAT highly respectable vegetable, the Potato, being now, it is hoped, thoroughly re-established in health, it was determined by a few leading members of the Vegetable Kingdom, to offer a banquet to the worthy and convalescent root on his happy recovery. The arrangements made for the dinner were on a scale of great liberality, and the guests included all the principal Vegetables. The invitations had been carried out by an efficient *corps* of Scarlet Runners, and the Onion occupied the chair. He was supported on his right by the head of the Asparagus family, while Salad occupied a bowl at the other end of the table, and was dressed in his usual manner. The Potato, though just out of his bed, was looking remarkably well, and wore his jacket, there being nothing to mark his recent illness, except, perhaps, a little apparent blackness around one of his eyes. After the cloth had been removed,

The Onion got up to propose as a toast, "the Potato, their much respected guest;" (*immense cheering.*) He, the Onion, had known the Potato from infancy; and though they had not always been associated in life, they had frequently met at the same table. They had sometimes braved together the same broils, and had found themselves often together in such a stew (he alluded to the Irish stew,) as had brought them, for the time being, into an alliance of the very closest kind. He, the Onion, was delighted to see the Potato once more restored to his place in society, for he, the Onion, could say without flattery, that society had endeavored to supply the place of the Potato in vain. (*Hear, hear.*) They had heard of Rice having been suggested to take the place of his honorable friend, but the suggestion was really ridiculous. *Risum leneatist, amice*, was all that he, Onion, had to say to that. (*Loud laughter, in which all but the Melon joined.*) He,

the Onion, would not detain them longer, but would conclude by proposing the health, long life, and prosperity, of the Potato.

The toast was received with enthusiasm by all but the Cucumber, whose coolness seemed to excite much disgust among his brother Vegetables. The Onion had, in fact, affected many of those present to tears, and the Celery, who sat next to the Horse-radish, hung down his head in an agony of sensibility. When the cheering had partially subsided, the Potato rose, but that was only a signal for renewed enthusiasm, and it was some minutes before silence was restored. At length the Potato proceeded nearly as follows:

"Friends and Fellow-Vegetables: It is with difficulty I express the feelings with which I have come here to-day. Having suffered for the last three or four years from a grievous disease which seemed to threaten me with total dissolution, it is with intense satisfaction I find myself once more among you in the vigor of health. (Cheers.) I should be, indeed, insensible to kindness were I to forget the anxious inquiries that have been made as to the state of my health by those who have held me in esteem, and sometimes in a steam. (A laugh, in which all but the Melon joined.) I can not boast of a long line of ancestors. I did not, like some of you, come in with the Conqueror, but I came in the train of civilization amidst the memorable luggage of Sir Walter Raleigh, in company with my right honorable friend Tobacco, who is not now present, but who often helps the philosopher to take a bird's-eye view of some of the finest subjects for reflection. (Immense cheering, and a nod of assent from the Turnip Top.) Though I may be a foreigner, I may justly say that I have taken root in the soil; and though I may not have the grace of the Cucumber, who seems to have come here in no enviable frame—(loud cheering)—I believe I have done as much good as any living Vegetable, for, though almost always at the rich man's table, I am seldom absent from the poor man's humble board. (Tremendous applause.)

"But," continued the Potato, "let me not get flowery or mealy-mouthed, for there is something objectionable in each extreme. I have undergone many vicissitudes in the course of my existence. I have been served up, aye, and served out—(a smile)—in all sorts of ways. I have been roasted by some; I have been basted by others; and I had my

jacket rudely torn off my back, by many who knew not the treatment I deserved. But this meeting, my friends, repays me for all. Excuse me if my eyes are watery. (Sensation.) I am not very thin-skinned, but I feel deeply penetrated by your kindness this day."

The Potato resumed his seat amidst the most tumultuous cheering, which lasted for a considerable time.—*Exch.*

Forget-Me-Not.

"Grandmother," said little Gretchen, "why do you call this beautiful flower, blue as the sky, growing by this brook, a Forget-me-not?"

"My child," said the grandmother, "I accompanied once your father, who was going a very long journey, to this brook. He told me when I saw the flower I must think of him; and so we have always called it the Forget-me-not."

Said happy little Gretchen, "I have neither parents, nor sisters, from whom I parted. I don't know who I can think of when I see the Forget-me-not."

"I will tell you," said the grandmother, "some one whom this flower may remind you of,—Him who made it. Every flower in the meadow says, Remember God; every flower in the garden and the field says to us of its Creator, Forget-me-not."—*Exch.*

FLOWERS.

CONTEMPLATE all of the Creator's great and glorious works, and where can you find a subject affording more amusement and instruction than the flower. From the veriest weed, springing up spontaneously by the dusty foot-path, to the gorgeous hothouse flower, reared with skill, and tended by the hand of beauty, all are equally fraught with the various forms of the beautiful. A microscopic examination of weed or pot-plant, reveals the astonishing foresight and infinite wisdom employed in their creation. The leaves, the flowers, the stems, and in short, all of the parts of the plant, furnish food for extended reflection and study.

Flowers are letters; they are a language,

speaking not to the ear but to the heart. And what language can be more poetical? It is a cipher-language, also, in which faithful hearts may correspond in billets closed to all prying eyes, except those of the initiated. It is likewise a moral, religious, and instructive language; in this last sense, the language of flowers may be read and studied by all willing to give the time. Go forth into the fields, the groves, and the gardens, and peruse this mighty book of Nature. Hill, woodland, lawn, teem with instruction; aye, and with amusement, too, for who could more pleasantly spend an hour than in hearkening to the voice of God, through the medium of these simple interpreters.

Flowers are emblematic of the virtues and vices of mankind. Where can be found a fitter emblem of purity and chasteness, than in the snowy white Lily of the Valley? Its beautiful petals are the pages of the Christian's life, unsullied by vice or sin, as the Lily's leaves are free from spot or stain of earthly things. Retiring modesty has its type in the humble Violet. She seeks not notice, but happy in her coy retreat, endeavors quietly to fulfill the duties allotted her by an all-wise Creator. Reader, who, think you, deserves the Violet for her type? Is it not the gentle maiden, who, shunning the allurements and fascinations of fashionable life, devotes herself to the spreading of the word of God among the poor benighted people around her, knowing nought of the luxuries of wealth.

Ambition has its type in the Mushroom, that in one short hour springs up and dies! Can not the belle of fashionable life likewise find her portrait here? Yes, in the rose we behold her fitly portrayed. Allowing herself to be swayed by every passing breeze that seeks to engage her attention, while she looks down with scorn upon the Violet, as her fancied inferior, but in reality her superior.

In this manner, many prominent characters find their analogies in a garden.

Flowers are also teachers, beautiful, silent teachers, proclaiming the wisdom and goodness of Almighty God, teaching the feebleness of man. Examine the mechanism of the humblest flower, and enough of the wonderful will be found to put vain man to shame. Can he, with all his vaunted power, construct a piece of mechanism to feed itself, independently of any one, and so admirably perform all of its functions? No, he never could, and, in all probability, never will be able to do so.

Great man, with all his boasted power,
Must bow before an humble flower.

When disturbed by angry or rebellious thoughts, go forth into the field, garden, or forest, and on all sides gentle monitors softly chide, in tones low and sweet, but ever audible. Hardened must he be who can resist the touching music proceeding from every flower. "Be patient," whisper they, "Be patient." Who can resist their pleading notes?

Flowers are a source of recreation, also. The maiden loves to decorate her hair with fillets of these gifts of Nature; and childhood throws aside his artificial playthings for these toys of Nature's making. In short, among flowers all characters may be found portrayed. High and low, rich and poor, in life are mingled as in a garden. Life is, in fact, a flower garden; men fade like flowers, leaving behind nothing but what the poorest beggar would not accept as a gift. Numberless are the resemblances between flowers and mankind, and many are the volumes that might be written upon these resemblances.

A. H. A.,

Class D, Hughes High School.

Cincinnati, January 20, 1852.

[This was read at the winter examination of the school.—Ed.]

An Editor at Work.

ARE, at work out of his den, and in what ought to be his Elysium, in his garden. And he appears to have been a sensible man enough to have enjoyed it too, amazingly, laborious though he found the occupation.—Hear what a Wisconsin Editor says of “THE HOE AND THE PEN.”

“We have been gardening this week, and, having no breath left to blow the bellows of aspiring politicians, have substituted the scissors for the pen. If those editors who are hurling their big words of defiance and reproach at each other, would just take the “shovel and the hoe,” and go out into the golden sunlight and the pure air of heaven, we think they would forget their angry feelings, and possibly acknowledge that their opponents were no greater rogues than themselves. Envy and malice can never exist in the presence of bursting buds and springing grass, and no man can sow his seed in anger, because the implied trust in the bounty and care of Providence of the act itself precludes any such wicked emotion. With the songs of the birds, cheerfulness, and may be the dim-remembered hopes and aspirations of our now distant childhood, come thronging back on our hackneyed hearts; and, if the freshness and luxury of these new feelings, thus aroused, moisten the eye, we need not be ashamed. Go out, then, ye sweltering denizens of grim and cobwebbed offices, into God’s glorious sunlight, that your sluggish blood may be quickened in its flow, and your hearts refreshed by a communion with nature; if you blister up your hands and get a kink in your back by a few hours of manual labor, so much the better for you. We have set the example, and can speak advisedly.”

Vegetable Portrait of Character.

THE MUSHROOM.—This plant presents one of those hieroglyphical pictures, which like the Rose and the Viper, have been easily recognized. Some summer morning after a storm, when heat and moisture have combined to hasten the processes of putrefaction, we find over the moldering ruin of some forest tree, or in the mellow soil where refuse has been thrown, hundreds of *vegetable upstarts* in full growth, which the sun’s eye now sees

for the first time. Creatures of circumstance and sphere, they send no deep and penetrating root into the soil. Owing their birth to the decay of nobler forms of life, whose fugitive elements they crudely assimilate; they are signs of corruption, and the umbrageous top which apes in form the protective majesty of the spreading oak, only provokes derision and contempt, instead of that respect and sympathy which wait on the slow growth of toiling merit, and are commanded by the *prestige* which hangs around birth and blood in old established families.

Instead of the leaf, organ of digestion and respiration, and emblem of elaborating industry, the under surface of its spreading top presents a multitude of involuted plaits, in allusion to the tortuous intrigue by which the upstart has gained his position. The upper surface is smooth and bald, covering over the latter as with a mask of simplicity, which becomes vulgar assumption by the nakedness with which it obtrudes itself upon the eye. Always aping the features of excellence, its color is whitish; not the clear brilliant white of unityism, but the dead white of civilized morality, and its rounded form wears by context, the gracefulness of the pot-bellied alderman. Its aroma is rank and unpleasant, in allusion to the vulgarity of the upstart family, and its trunk and top, whether involuted or otherwise, is but a spongy tissue of cells, without any of the solid stamina, which in the valuable wood of nobler plants, result from the elaborate effort of germs developing themselves under a higher vegetative law.

The intensity of their life is all expended in rapid nutrition, as a puffed and bloated prosperity in the class represented, supplies the place of refinement and real worth of character.

The want of education is depicted in the barrenness of the plant, in the absence of the leaf; and the lack of sentiment or spirituality in the absence of the flower, and in the rank odor which they exhale. Their smooth polished surface throws off the rain-drops, as truth descending from higher spheres, of which rain is the emblem, glances off from minds habituated to falsehood and duplicity, without being assimilated by them.

They keep the soil beneath them dry—subtracting the decomposed juices of other plants or refuse matter; products of corruption.

This plant, like the class represented, is of many varieties, differing in forms, colors and properties, though all preserving very distinctly the generic type. There are some of brilliant hues, which type the chances of meretricious development enjoyed by those who have suddenly acquired wealth.

Some are edible, having but slightly the poisonous qualities of the class, and some have a sort of bastard efflorescence in little tufts, betokening a germ of spiritual aspiration in their typical characters.

Fruit on Kelley's Isle.

THE peaches are all killed except the late Heath, which does not seem much injured. All other fruits bid fair to produce a good yield, if the curculio should leave them alone. Apricot buds are not injured at all; the coldest observed here was from 14° to 16° below zero, according to the different thermometers. So that even in this favored isle of the north the peaches have suffered, while in many spots through this part of the state they partially escaped. A. K.

SPRING.

BY MRS. R. S. NICHOLS.

THE Spring is here, was whispered yester eve :

Behold her foot-prints on the vales and mountains ;
No more the chilling gales shall vex and grieve
The crystal waters of the low-voiced fountains ;
No more shall Winter, loth to leave the land,
Where through the darker months he wildly reveled,
Clutch in his eager grasp and pinching hand
The Spring's bright tresses, frost and storm
Dishevelled.

Out on the hills ! oh, Life ! what joy is thine,

Through all thy veins thy ruddy streams are leaping ;
I drain from Nature's breast a generous wine,
That rouses Fancy from its dreamless sleeping :
Out on the hills—the moss beneath my feet
Draws its light nourishment from well-springs hid-
den,

And here within this shady, lone retreat,

My soul shall drink of heavenly streams unhidden !

Hark ! 'tis the silvery cadence of melodious birds

That thrills fond Echo with delirious chanting ;

Far down the slanting hills are grazing herds,

And in the fallow-fields the wearied ox is panting ;

A rivulet winds softly through the grass,

Whose velvet carpets o'er the scented meadow—

There idle butterflies, like man, alas !

Oft grow enamored of a flitting shadow.

The air is instinct with a living train,

Like golden dust the shining motes are winging ;

The sun shines warmly on the sprouting grain,

And on the bough the merry locust's singing :

Down in the hollows fashioned by the rain—

Along the breezy isles, the wild-flowers cluster,

The years have left upon the rocks a stain

Whose tints will deepen with each waning luster.

MADISON, May, 1851.

What are thy gentle ministrings, Spring ?

Thou dove from Winter's ark with olive token ?

To waiting human hearts what dost thou bring,

What balm—what Lethe to the spirits broken ?

Canst thou bind up the torn and bleeding heart,

Or soothe the mourner's sharp, consuming anguish,

Revive the hopes of drooping sons of Art,

Or gild the gloomy cells where captives languish ?

Canst thou regenerate the hoary Earth ?

Remove the wickedness from lofty places ?

Usher the soul to an immortal birth,

Or stay an instant's breath Time's rapid paces ?

Canst thou reveal the mysteries of God,

Inform the mind of spheric light and motion ?

Teach how the fragile flower springs through the sod,

Or tell the secrets of unfathomed Ocean ?

Thou answerest not, oh ! bright, prophetic Spring—

Thou glorious symbol of man's resurrection,

When he shall rise and with archangels sing

Redeeming love and the Adored's perfection—

Thou answerest not. Yet there are mystic words

Borne up to heaven on thy thousand voices ;

The winds and waves and rainbow-plumaged birds

Unite in chorus, as old Earth rejoices.

Love ! love's the burden of their joyous song,

That theme which angels chant in groves supernal,

That's hourly echoed by the wondrous throng

Encircling ever the white Throne Eternal,

Join in my soul, and strike thy harp again—

Though weak and faltering, thou hast depths of
feeling

Which may be sounded by this deathless strain

That through God's universe for aye is pealing !

Cincinnati Commercial

Forests of Panama.

AFTER we had crossed the valley, we entered into a magnificent forest that appeared to become thicker and thicker, till it almost shut out the intense light of a tropical day, and thoroughly screened us from the piercing rays of a tropical sun at its zenith! It was indescribably delightful. A cool, emerald-tinted twilight surrounded us on every side, and still, as we rode on, we seemed more closely encircled, and more completely canopied by the pleached and heaped together branches. It was a ceiling and walls of foliage and flower-enameled greenery.

When we got still deeper into that mighty forest, it seemed like a vegetable mammoth cave, and as if we were miles below the surface of the earth; for it appeared difficult to believe that otherwise, in the blazing noon of the tropics, you could be so entirely sheltered from every ray of the sun, with only boughs and leaves above you. The rich underwood mingled its countless shoots and trails with the dense down-hanging garlands of parasites, as stalagmites meet stalactites in earth's cavernous recesses.

We heard a shower of rain at one time above us, like the tramp, tramp of a thousand fairy legions; but hardly a drop reached us (it was not a very heavy rain, of course.)

We saw scarcely a living creature in the forest, (though we heard many,) except insects, and by them we were much assailed, though at the time we did not suffer so much as afterward from their attacks. Besides the alligators, we had seen on the banks of the Chagres the ugly armadillo, and various lizards, and had heard a loud roaring, which I thought perhaps proceeded from the Puma, or South American lion, but was told it was the sound made by a large black monkey that frequents the Isthmus. The forests are said to be inhabited by the jaguar, black tiger, wild-cat, ocelot, panther, and a variety of monkeys, who may be often heard chattering away briskly with their numerous comrades.

We have generally been pretty fortunate in seeing interesting sights in the countries we have traveled in, and during this ride to Panama we, for the first time, encountered that grand spectacle, a forest on fire. We rather suddenly found ourselves enveloped in a dense smoke, and presently the

ground over which we were riding, (it was a narrow mule path through that apparently illimitable and interlaced forest,) and all the surrounding trees—trunks, boughs, branches, leaves, and creepers—became of a brilliant, intense, glaring sort of red orange color, (something like the hue of the ripest and richest Maltese oranges inside,) and the most deliciously odoriferous scents pervaded the whole air, as if a thousand phoenixes were expiring at once in their burning spicy nests. In short, the forest was on fire at a little distance from where we were riding. The guides called out to us to push on, but not to be alarmed, for they said there was scarcely any danger, as the trees were so enormously large, and so thickly crowded and jammed together there, that it burnt very slowly, and also there was very little, if any wind, and that was, it appeared, in our favor. The trees, too, had been a little moistened by a late shower; so, altogether, we felt but little fear, and observed the majestic spectacle with feelings of tolerable security. There was, however, a very loud crackling of branches, like an advancing fusillade, and the sparks and flashes fell fast on us, covering us from head to foot.

We rode steadily on, and before very long emerged from those thick clouds of fragrant smoke which seemed redolent of frankincense, and of all the odorous breathings of "Araby the blest." We emerged, I say, from that perfumed atmosphere, and lost sight of the livid scarlet, and orange-colored reflections of the flames passing once more into the dazzlingly bright golden sunlight of the tropics, for just then we came upon a little clearing. We were glad to breathe freely, and shake the remaining ashes from our clothes, which were, happily, of very incombustible materials.

We soon plunged again into the giant woods. And here I wish I could convey to the reader the faintest idea of their astonishing beauty, and of their peculiar characteristics; so gigantic, yet so wondrously delicate in detail; vast, colossal bowers hanging over other bowers, festooned and twining together in twenty thousand wild romantic shapes; and with that gossamer net-work of light creepers flaunting here and quivering there, as if the rainbowed spray of myriads of fountains had suddenly been arrested and hardened by magic into

permanent forms. Then *such* trees! studies in themselves; some like vast columns of burnished silver, with the most smooth, brilliantly white bark you can imagine, and a dome-like top of magnificent foliage; others with glorious leaves, like great green stars, or rather three-quarters of a star, shining like sculptured emeralds; then a majestic kind of wild cotton-tree, with its beautiful product hanging, like feathery snow, from it.

Another inexpressibly lovely tree is the bamboo, which grows to an immense height here, and looks like heaps of gigantic green ostrich feathers. In some instances, I saw it forming a most perfect Prince of Wales' Plume, of the most colossal dimensions, and yet of the most aerial and delicate lightness imaginable. Then there are the beautiful plants of the "Spanish daggers," and the coffee-trees, the cocoa-nut palms, (with the huge cocoa-nuts hanging so temptingly from them,) and the zapote, with its large, splendid fruit; the mango, the calabash-tree, and the caiba, and multitudes of others.

And then there are the superb Titanic lilacs, and the immense bananas, which, whenever exposed to the scorching sun, have their giant leaves cracked and divided by the heat, and which are sometimes split by the wind; and there are literally roses wedged with roses, ever lovely, and heaped in such close, inextricable coils, that they almost seem a single mammoth flower; and wildernesses of hothouse plants, (I mean hothouse plants in *our* country with its coal-fire sun,) hiding the soil with their lavish luxuriance, and almost forming, one with another, an indistinguishable mass, where the crowded dyes seem to shift, and change, and melt into each other, like the hues of diamonds by lamplight. It is indeed the poetry of vegetation. Yes! it is a mighty poem, written by the living sun on the earth, caught up by the elements, and vibrating, as it were, through the beating heart of eternal Nature, that is brooding, like the mother dove, mighty in love and loveliness, over her own offspring of beauty and beneficence.

Sublimely fair, however, as the scenery was, that we might not be deluded by the dream that it was Elysium, we had a road that might have better befitted Tartarus—a road that might well have been designed to torture the wandering spirits of flagitious

mules—and of mule riders too. Sometimes the descents were so precipitous that the creatures almost half tumbled, half slid down them; at other times they had to go stumbling about in break-neck holes of frightful depth, as if they were about to seek in a subterranean passage a solution of the difficulties of the road!

Another disagreeable circumstance was, that the strong thorns belonging to various prickly shrubs, which encroached on the narrow path, caught our riding dresses, which were too long for this rugged expedition, and often nearly dragged us off our saddles. Mine, particularly, which was of very strong stuff, several times, as nearly as possible, drew me off; for the mule had a terribly hard mouth, and disdained the most violent pullings of the rein, as my riding-dress did the clawings of the stubborn shrubs. On one occasion, just as I hung between shrub and saddle, it kindly tore, and I somehow managed to find myself in the saddle again; but as to stopping the mule, it was hopeless. Talk of "Patience on a monument,"—think of Patience on a *mule*!

At rare intervals a small clearing would let the sun come suddenly down upon us, like a thousand flashes of scorching lightning in one; but we had doubled thick handkerchiefs, and tied them over our bonnets, so that we did not suffer much from the powerful rays. We gathered the leaves of the fan-palm, too, and made additional head-screens of them; but in general the light and heat were mellowed and softened by the overarching of trees I have described.—*Lady E. Stuart Wortley.*

A Curious Tree.

THERE is at the present time growing from a crevice in one of the dilapidated walls of the once celebrated but now ruined castle of Cessford, an ash-tree, in all its graceful and healthful luxuriance. It is a remarkable circumstance, that not many weeks since this tree appeared quite sickly, owing to its deriving no support except what the moisture of the wall supplied; but lately one of the fibrous tendrils found its way to the earth, and taking deep root in the soil, the tree now presents a green, healthy appearance, and is now thirty feet in height. Whether planted by man, or not, is unknown.—*Kelse Chron.*

Paint for Buildings.

WE are far from supposing that our ideas will exactly agree with those which have of late been regarded as most orthodox; but in matters of taste we may hope to be excused for entertaining preferences a little out of the beaten track. Variety is said to be the spice of life, and why may not a manifestation of striking dissimilarities of taste, as to the modes of ornamenting our places of residence, be considered, on the whole, altogether preferable to the dull monotony of uniformity? Thomas Paine, who said some excellent things, as well as some very foolish things, could not help smiling at the conceit of what a drab-colored creation this would have been, if God had been a Quaker. But *we* should be grieved at the conceit of what a creation this would have been, if God had left out of it that excellent class of Christians. The fact is, it takes everything to make a world, and in this country we are in favor of the "largest liberty," especially in matters of taste and opinion.

We are not so inveterately utilitarian, as to wish to sacrifice all that is ornamental for the sake of durability; and yet, when about to paint a dwelling, or any other building, due attention should be paid to this matter. And it is well known, that white lead, whether mixed with other colors or used by itself, is the least durable of any of the colors commonly used for such purposes. Nevertheless, for country houses, more or less of it is indispensable.

We venture to assert, what many are beginning to be sensible of, that the dark colors, which, for a few years past have been quite fashionable, will ere long be repudiated. We have heard much said in favor of subdued or neutral colors, and for certain kinds of buildings they are well enough. But we confess that it transcends our limited powers of discernment altogether, to discover in these miserable drabs and umber colors which have been so extensively recommended, anything to please the eye or gratify the taste. They contrast badly with the foliage in the vernal seasons, and at any and all times give a somber and cheerless aspect to the scenery. Nor are we prepared to decide in favor of the unmitigated white, with green blinds, which for years was the distinguishing characteristic of all country houses of any considerable pretensions. Still, white lead is, and will

continue to be, the principle ingredient in paint for buildings in the rural district.

For a dwelling-house in a favorable locality, and surrounded, as every house should be, with trees, vines, and shrubbery, we consider it in bad taste to paint with any color darker than a French gray. To prepare this, all that is necessary is the addition of a very small quantity of black, finely ground, and of Venitian red, sufficient to give it the slightest possible tint. This, darker or lighter, to suit the fancy of the owner, renders it unnecessary to give any other color to the trimmings, presents an agreeable and sufficiently subdued appearance to the building, and contrasts finely with the foliage.

A few words, now, as to the best mode of preparing paint principally of white lead.—And here we speak from actual experience, and therefore with considerable confidence. Pure white lead, by its chemical action on the oil, will lose its body, or adhesiveness, in a few months, when exposed to the weather, and should never be used alone. We shall not attempt to give the reason of this—we only state the well known fact. Where three coats of paint are to be applied, we should recommend, for the first, a mixture of Spanish white, say one pound to two of the white lead. For the second about one pound to three. For the last use the lead pure or nearly so. Another plan, and we think a still better one, is to make use of calcined plaster of Paris, or gypsum, which, when nicely prepared, and thoroughly mixed, gives a much clearer color, and better body, and adds greatly to the durability of the paint. One-third, or even one-half the quantity of gypsum to two-thirds of pure lead, will be found to answer an excellent purpose, and will save considerable expense. These desultory remarks will be followed, in due time, by more extended, and more practical observations, and we close with the suggestion that spring and autumn are the best seasons for painting.

R. F. ELLIOT.

Ohio Farmer.

Early Strawberries.

THE editor of the Sentinel, Columbus, Ga., speaks in glowing terms of the ripe strawberries in March and April, and of the beautiful bouquet received from his neighbor Peabody, editor of the *Soil of the South*.

Transactions.

Cincinnati Horticultural Society.

SINCE the last Report, our meetings have continued to be characterized by great interest, and very pleasant feelings in the discussions that have occupied the attention of the members.

The topics that have claimed most attention were the culture and properties of asparagus, reported on page 369 of this number, and of celery, reported on p. 371. Since which, the culture of rhubarb, and of sea-kale, have enjoyed a share of attention. The effects of the frost, and the prospect for fruit, have also furnished interesting topics. From the varying reports of persons differently situated, very different results were produced, and it is difficult to make up one's mind as to what will be the prospect at last. No one anticipates a full crop, and many who are most sanguine will find upon a close examination of the bright and cheerful flowers, that the essential organ, the pistil, is dead, although the showy parts of the blossoms are so handsomely expanded. This subject has been made the order for a special discussion, on the motion of Mr. Ernst, who desired information respecting the effects of frost, and the powers of vitality in plants to restore the healthiness of fruit-buds and spurs, after they had presented appearances of serious injury.

Seeds, grafts, etc., have been distributed during the month, and will, it is hoped, render good service, by diffusing the benefits of good things among a larger number.

The Wine Examination, advertised for the first Saturday in April, was postponed to the third, and the report does not come in time for publication.

The Exhibitions of Fruits and Flowers during the month have not been large, but some points of interest have been elicited by them. The Northern Spy, Peck's Pleasant, Fall Pippin, and several others, have been presented in fine condition.

The former, though a good keeper, sometimes very handsome, and always exquisitely fragrant, does not appear to charm the Western palate so much as some other apples. It has energetic admirers, however. The Peck's Pleasant, sent from Lafayette, Indiana, under the name of Gobit, made quite a sensation—large, fair, tender, and delicately flavored, reminding one of the Newtown Pippin, and of better texture. The fruit so well known here as the Fall Pippin, was brought in from the market, with so much beautiful coloring as to deceive many fruit-men, and the committee were divided in opinion respecting its identity. Some suggested that it was the Holland Pippin, but this was readily disproved. A thorough investigation and reference to authorities induced a belief that the apple we have always known by this name is really the Reinette d'Espagne, or Spanish Reinette—an old variety long cultivated in Europe, and justly admired.

These specimens were brought from New York, and their excellence and beauty enabled the owner to sell them at once, at ten dollars per barrel. The variety is a fall fruit with us; but even here it has been kept in good order by Mr. Ernst until March.

✧ Exalted anticipations are entertained by sanguine members of the Society, as to the beauty and success of the approaching Floral Exhibition, which is to be held on the 12th of May. This will be the season for our skillful gardeners to show their handiwork. Let all attend!

The Buffalo Horticultural Society,

Has been holding semi-monthly meetings.

January 20th.

They met at Lewis Eaton's—the President in the chair.

The following fruits were exhibited:

By L. Eaton—*Apples*: Baldwin, Eaton.

By Mrs. Vandeventer—Two varieties, for a name.

The committee appointed to publish the Transactions of the Society for the past year, reported progress; and after a discussion of the apples presented, and on various other subjects, the society adjourned.

February 17th.

The society met at Benjamin Hodge's—Vice President Taintor in the chair.

Fruits exhibited:

By Benj. Hodge—*Apples*: American Golden Russet, Beauty of Kent, Brabant Bellefleur, Carthouse, Esopus Spitzenberg, English Russet, King, Lyman's Pumpkin Sweet, Lady, Minister, Michael Henry Pippin, Pownal Spitzenberg, Roxbury Russet, Swaar, Westfield Seek-no-further. *Pears*: Glout Morceau, Moccas, Pound.

By Dr. R. Coppock—*Apples*: Yellow Newtown Pippin, Sweet Pearmain, Swaar, Northern Spy, Crow's-Nest, Russet.

By L. F. Allen—*Apples*: Ladies' Sweet, Spencer.

By Warren Granger—*Apples*: Baldwin, Northern Spy, Swaar.

The following were tested, and discussed:

Apples—Ladies' Sweet, American Golden Russet, Northern Spy, Sweet Pearmain, Minister, King, Newtown Pippin, Spencer, Carthouse, Westfield Seek-no-further, Brabant Bellefleur. *Pears*—Glout Morceau.

The Treasurer made his annual report, which was laid on the table until the next meeting.

The committee on the library reported that the following works had been purchased for the use of the society: Michaux's North American Sylva, and Nuttall's Continuation; Downing's Landscape Gardening; Allen on the Grape; Liebig's Agricultural Chemistry; Lindley's Guide to the Orchard; Koeller on Insects; Norton's Elements of Scientific Agriculture.

Also, that the missing numbers of the Horticulturist and of the Magazine of Horticulture, had been replaced, preparatory to binding these works.

Dr. R. Coppock stated, that Messrs. Mason and Levering had tendered to the society the gratuitous use of a room for the purpose of holding the semi-monthly meetings; whereupon, on his motion, it was accepted, and the thanks of the society unanimously voted to Messrs. Mason and Levering for the same.

The committee on publication made a report, which, after an animated discussion, was referred back to the committee.

After which, the society adjourned.

March 3d.

The society met at Lewis F. Allen's—the President in the chair.

Fruits were exhibited:

By L. F. Allen—*Pears*: Easter Beurre, from Ellwanger & Barry, of Rochester, very fine.

By B. Hodge—*Apples*: Fallawater, Jonathan, Fameuse, Lovett's Sweeting.

By W. Granger—*Apples*: Baldwin, Esopus Spitzenberg, Swaar, Roxbury Russet.

By L. Eaton—*Apples*: Baldwin.

The following were tested and discussed:

Apples—Fameuse, Jonathan, Baldwin, Swaar.

Pears—Easter Beurre.

The Treasurer's report was then taken up and accepted, and, after the usual discussion on various subjects, the society adjourned.

March 16th.

The society met at Abner Bryant's—the President in the chair.

Fruits were exhibited:

By A. Bryant & Son—*Apples*: Baldwin, Esopus Spitzenberg, Westfield Seek-no-further, Lady, Fameuse, Tallman Sweet, R. I. Greening, Pomme Grise, Wine-sap.

By B. Hodge—*Apples*: Northern Spy, Swaar, Brabant Bellefleur, Lyman's Pumpkin Sweet.

By L. Eaton—*Apples*: Baldwin.

The Osage Orange was stated by several members to be but slightly injured, and its fitness for a hedge plant was generally admitted.

The following Pears were discussed: French Jargonelle, Louise Bonne de Jersey, Stevens' Genesee, Van Mons Leon le Clerc, Duchess d'Angouleme, Winter Nelis, and Orange.

The report of the committee on publication was then taken up, and accepted as amended.

On motion of W. R. Coppock, a vote was passed, recommending to the public the Agricultural Warehouse of Messrs. Mason & Lovering; which was ordered to be published.

JOHN B. EATON, *Rec. Sec'y.*

The Pittsburgh Horticultural Society

Is holding monthly meetings, which indicate considerable spirit among the members.

After transacting other business, at a recent meeting, it was resolved to subscribe for the WESTERN HORTICULTURAL REVIEW, and to recommend the work to the public patronage. This is very gratifying indeed, and is an earnest of what my maternal State means to do for my enterprise. I can not beg, nor shall I; but "material aid" is ever hailed with pleasure by him who undertakes to work for nothing in such a good cause. The printers, though clever fellows, are less philanthropic, and must be paid. Gardeners, amateurs, orchardists, and vine-dressers, my interests are your interests—lend your aid.

Bouquets and plants already enliven the tables of our sister society at Pittsburgh—showing the skill of Jos. McKain, John Lowen, and others. A pleasant rivalry to ye!

From the polite Secretary, Henry Woods, I learn that the officers of the Society are:

President—John Chislett.

Vice President—Jno. Murdock, Jr.

Treasurer—A. Hersperger.

Secretary—Henry Woods.

Executive Committee—A. Campbell, A. B. McQueen, Jno. Wardrop, Jno. Murdock, John Lowen, Jno. McKain, C. L. Goehring, Chris. Lockhart, T. J. Bigham, W. P. Marshall, W. H. Williams, and S. N. Wickersham.

The American Wine Growers' Association

HELD its regular monthly meeting on Saturday, March 27th, 1852—Dr. Mosher in the chair.

The Committee on Agricultural Education asked further time, and were directed to call a meeting of the association so soon as they were ready to report.

A communication was read from N. Longworth, upon the subject of distillation. Referred to Mr. Brace, to report upon the queries therein contained.

Suggestions were made for the Vineyard Calendar for May, and some discussions were had of a general character.

National Convention of Agriculturists.

THE following preamble and resolutions were adopted by the Pennsylvania State Agricultural Society, at a session held in the hall of the House of Representatives, at Harrisburg, Jan. 20 and 21, and we hope they may meet with the active, cordial co-operation of every sister society.

Whereas, It is now an admitted fact that in no way can a nation increase in wealth and power so fast as by encouraging and securing a rapid improvement in the science of agriculture. All admit, that while manufactures improve, commerce gives value, and labor and capital stimulate, it is agriculture alone that originates, the earth is the parent of them all—all equally derive their origin from the cultivation of the earth, and all must be equally dependent upon it for sustenance. Regarding it, then, as the basis of all other arts, it justly claims pre-eminence over all others; and such is its connection with all the comforts of the human race, that it may justly be said that agriculture is the only firm and staple foundation of national greatness. And the various state societies have already fully demonstrated the fact that in no way can this great and valuable science be so substantially and rapidly improved, as by organized and concerted action, and it is therefore a self-evident fact that the formation of a National Agricultural Society is at this time a matter of great moment and importance; therefore for the purpose of forming such a society be it.

Resolved, That we recommend the calling of a convention of agriculturists of the United States, to meet at the city of Washington at such time as may be fixed upon as soon as it is ascertained that a sufficient number of States of this Union have approved of the plan to warrant the undertaking.

Resolved, That this society will elect one delegate from each congressional district of the State, who shall be a member of this society, to represent this society in said proposed National Convention.

Resolved, That this society expects and earnestly requests the co-operation of every State in the Union in this matter.

Resolved, That all States or State Societies, willing to co-operate with us in this laudable enterprise, are requested to inform the President of this society of such fact; and so soon as five States have signified their willingness to act in the matter, then the President of this society shall, after ascertaining by corresponding with the several State Societies upon the subject, the most suitable time for calling such convention, fix on a time for the meeting of said convention, of which he shall give notice in as many papers as may be necessary.

R. C. WALKER, *Secretary.*

Harrisburg, Jan. 26, 1852.

[I like this proposition, and hope the different state societies, where organized, will take the matter in hand promptly.—Ed.]

Montreal Horticultural Society.

President—Hugh Allen, Esq.

Vice Presidents—Hon. Justice Day, Hon. Justice McCord, Hon. A. N. Morin, M. P. P., Rev. Mr. Villeneuve.

Treasurer—John Frothingham.

Secretary—William Brown, of Cote de Neige Nurseries, Montreal.

Directors—Rt. Rev. Dr. Fulford, Mr. Sheriff Boston S. T. Lyman, J. J. Day, Jno. Torrance, E. Muir, Jas. Ferrier, Jr., Geo. Shepherd, Richard Sprigings, J. E. Guilbault, Chas. Hugal, Jas. Cooper, Geo. Garth.

The Exhibitions for 1852 will take place on Thursdays, 20th May, 30th June, 12th August, 9th September, (annual.)

Committee on Southern Wine.

ON Monday, April 5th, 1852, several gentlemen, having been invited by Jno. A. CORNEAU, met at the Burnet-House Store No. 2, where they were introduced to Mr. NOYES, of Natchez, Mississippi—who presented for their consideration some samples of his wine, desiring that they should be critically examined.

They accordingly proceeded to the investigation.

Bottle No. 1—Was made last year from the Roanoke grape, or White Muscadine, to which about seven per cent. of a wild red grape had been added, also fifty-five per cent. of water, and five per cent. of proof spirit. This is a red wine, and called "Claret"—its specific gravity, by our standard instrument, is 3, by the alcohol scale.

Bottle No. 2—Was also made last year from the marc, to which fifty-five per cent. of water had been added, and four ounces of brown sugar to each gallon, also five per cent. of spirit. This article now weighs fifteen by the sugar scale, requiring that amount to counterpoise the instrument.

Bottle No. 3—Was called "pure juice," and said to have been made from the same grape in 1850, and bottled after the first fermentation at five months old: to this had been added two per cent. of water and four ounces of refined sugar. This sample is light colored, sweet, and highly musky; it now weighs one hundred and six of sugar! indicating a very highly saccharine grape, besides the amount of sugar added.

Bottle No. 4—Was also called "pure juice," and said to have been made in 1847. This was the favorite of the maker, and very highly valued by him. To the juice, four ounces of sugar had been added, and it had been bottled at five months, without undergoing a second fermentation! This also was perfectly clear and transparent, except the distinct spiculæ floating in the fluid. The present weight is forty-one of sugar.

A bottle of Scuppernong wine, from North Carolina, was also tested, and found to have similar aroma, and to be equally drugged with sugar and spirit.

The gentlemen present, being admirers of dry wines, felt that it was but fair that their judgment should not be taken without allowance. They are not accustomed to decide upon cordials nor sweet liquids, preferring the fine sprightly juice of well prepared Catawba; some choice samples of which were produced by Mr. Corneau.

Noyes' wines were all of them marked by the peculiar and high aroma of the Scuppernong grape, which certainly appears to have a decided character—and to many, and for certain purposes, desirable.

The specific gravity of the samples is remarkable, taken in connection with the history of the manufacture. Nos. 3 and 4, with similar amounts of sugar added to the juice, but bearing different age, have a very different weight. This may have arisen from the change of so much sugar into alcohol.

A remarkable point in the history of these samples, is the statement that they were bottled at five months, and that they have never experienced a second fermentation! This controverts our notions and the results of our observations with our wines. It may be, that so rich a syrup, or a liquid so highly charged with alcohol, is not subject to fermentive change. A similar plan is pursued by our apothecaries in many of their preparations, which are treated with sugar and alcohol, as agents for their preservation from change.

The committee generally agreed that the juice of the Scuppernong must be characterized by a large share of saccharine matter, and by a remarkable aroma; and further, they recommend all cultivators of these grapes to make pure wine, entirely free from mixture.

Mr. Noyes entertained the committee with an account of his mode of cultivation, which he considered to have improved the grapes very much.

He plants posts twenty feet apart each way—they

are to be nine feet high—and across their tops he stretches No. 11 wire, crossing the field in each direction. The spaces between the posts is again divided by wires four feet apart, and these squares are then covered with pieces of cane nine inches apart, upon which the vines are to be trained. One vine is planted beside each post, and when it reaches the trellis work it is allowed to spread at liberty. The *pruning* is peculiar, and entirely different from the system pursued among us. It consists simply in thinning-out redundant wood; he never shortens in the branches, having observed that the fruit is diminished in quantity and not improved in quality by that process.

The Culture recommended by Mr. Noyes is remarkable. He claims to follow nature by keeping the roots near the surface; he therefore prefers shallow tillage, and he applies charcoal, which he considers especially valuable as a manure. Since pursuing this plan, he has had no rot, which formerly attacked his grapes about the time of coloring. He says that by this culture, the bunches, which naturally have but one, two, and sometimes three berries, have increased to the size of the Catawba.

NOTE.—Is it not a little singular, however, that this grape should have been so changed by transfer from North Carolina, where Mr. Weller finds it necessary to add "three pounds of double-refined sugar per gallon," to prevent its turning to vinegar. (See Patent Office Reports.)—Ed.

Franklin Co. (Ind.) Agricultural Society

Held one of their agreeable meetings on Saturday, April 10th.

Jno. W. Hill delivered an interesting and profitable address upon grasses and grass-farms—which has been published in the "American," from which this account is condensed.

After attending to the regular business of the Society, a very complimentary resolution was adopted—recommending the Western Horticultural Review.

The Editor was also invited to address the Society at its next meeting.

Interesting discussions were had upon the culture of potatoes, and upon the treatment of cattle.

Topics were assigned for the discussion at the next meeting, which is to be held at Brookville, Ind., on Saturday, May first.

The proceedings of this flourishing Society have already been noted in a previous number of the Review. May they go on and prosper, diffusing light.

✂ The Greene County Agricultural Society have purchased six acres of ground near Xenia, which is to be fitted up as a permanent place for holding the annual fairs of that county.

✂ The Directors of the Agricultural Society in Muskingum county, have taken a lease of a large and eligible tract of land, situated upon Putnam Hill, upon which it is the intention of the Directory to erect the necessary buildings, fences, etc., to render it suitable for a similar purpose.

Western Poultry Society.

THE trustees of this new association have held some preliminary meetings, to make arrangements for the approaching grand show of Dorkings, Shanghaies, Polands, *et id omne genus*, species and varieties, which is expected to come off with great crowing and cackling on the 12th of May.

As a hen in a coop, with 20 little chickens running at large, are said to destroy a world of insects, why should not the tribe be taken under the protecting wing of the horticulturists? Why not?

Notices.

The Agricultural Press

Is more and more productive;—one after another, they come knocking at the door for the civilities of an exchange.

May they all prosper and thrive, is my wish; and if the people understand their own interests they must do so. No country is so well farmed, and consequently none becomes so rich, as that wherein every farmer's boy reads the diffused intelligence of our prolific press, and therefrom extracts valuable information. It is now too late to talk about "book-farming" with a sneer.

From the sunny South comes a neat quarto, to which the hand of welcome is extended cheerfully. It is called **THE SOIL OF THE SOUTH**; and though one of the correspondents of this journal has criticized its strawberry notions pretty severely, it is hoped that Mr. Peabody, its capital editor, will make every allowance for our *fragrant* inclinations, especially as he has adopted the views so long and earnestly promulgated from this region.

WESTERN RESERVE FARMER AND DAIRYMAN. Jefferson, Ohio: N. E. French, editor, R. M. Walker, assistant. \$1.

The great interests of the Dairy appear to demand associative action, and an organ through which those engaged in similar pursuits may exchange sentiments. The Dairy-men's Association has been organized, and here is a periodical devoted to their pursuits and interests. Let them see it well sustained.

AMERICAN VETERINARY JOURNAL.—"This is the title of a new monthly publication just commenced at Boston, edited by Dr. George H. Dadd, one of the most eminent and successful practitioners of veterinary science in the country. The publication of this journal,

should it meet with that support and encouragement to which its merits justly entitle it, will do much toward alleviating the diseases of that noble and useful animal, the horse. We know of no more extensive field for the diffusion of useful knowledge than that chosen by Dr. Dadd, and he has our warmest wishes for his success." So says the Farmer and Dairyman.

The Veterinary Journal is issued monthly, containing thirty-two pages of closely printed matter, at the low price of one dollar a year.

THE FARMER AND ARTIZAN makes its debut from the extreme North-west, hailing from Keokuk, Iowa—Vol. I, No. 1, April, 1852—containing 16 pages, devoted to agriculture, horticulture, mechanics and manufactures.

It is devoted to the development of these interests in the Upper Mississippi Valley. The editor, W. G. Edmundson—a name not unknown in the agricultural publications of Ohio—says that the matter contained in its pages will be chiefly from his pen, and that he is a practical farmer, who has been connected with the agricultural press for eight years; but that he now proposes to engage largely in farming near Keokuk, so that he may prosecute experiments that shall be fully reported in his own columns. Terms fifty cents a year.

THE GREEN MOUNTAIN FARMER—Comes bright and fresh from Rutland, in Vermont, to visit our valley. It is edited by L. R. Morris, who appears to understand his position and conducts his craft admirably. \$1.

THE WORKING FARMER.—In April commenced the fourth volume of this valuable scientific agricultural journal, edited by Prof.

M. J. Mapes, of New Jersey. It is published monthly, at one dollar per year, and in real intrinsic worth is fully equal to any similar publication in the country. New York.

Books, etc.

ADDRESS OF M. P. WILDER, before the Berkshire Agricultural Society, at the Annual Exhibition in Pittsfield, October, 1851.

This, like everything else from its excellent author, bears an impress of value and importance in its real merit that marks its origin—as coming from one who holds the rural interests of the country to be cherished objects.

TRANSACTIONS, CONSTITUTION, ETC., OF THE IOWA HORTICULTURAL SOCIETY. Burlington, Iowa.

It is delightful to see the horticultural tastes cultivated, especially in what we are apt to consider a new country. Here, indeed, we have evidence of great progress, in the existence of the Southern Iowa Horticultural Society, and its worthy transactions, which do great credit to the persons who have been instrumental in organizing and maintaining it. The contributions of Fruits, Flowers, Vegetables, and other objects of interest, are exceedingly creditable, and the evidence here presented would induce one to suppose, that this society was destined to take a high rank among kindred institutions.

A feature which cannot be praised too highly is found to be the distribution of a large number of valuable periodicals and other works upon Horticultural topics—this is much more appropriate, and must be productive of more real good than money premiums.

The pamphlet closes with the excellent address of the Hon. C. Mason, delivered at the Annual Exhibition in September.

Will not some of the Members send notice of the time of the Fair for this year?

PREMIUM LIST, Constitution, Officers, etc., of the Albany and Rensselaer Horticultural Society. From this, it appears, that there will be four Exhibitions during the year—on the 22d of June, on the 6th of July, on the 14th and 15th of September, 1852, and on the 3d Wednesday of Feb., 1853.

LIST OF PREMIUMS of the New York State Agricultural Society, to be awarded at the Annual Cattle Show and Fair at Utica, on September 7, 8, 9, and 10, 1852. This list is said to be very judiciously arranged, and, indeed, it would be strange if the long experience of this society did not produce a better schedule than most of their juniors and successors in the good work.

SAXTON'S COTTAGE AND FARM LIBRARY.—*The American Rose Culturist; a Practical Treatise on the Propagation, Cultivation, and Management of the Rose.* Illustrated by engravings.

This is a simple but useful treatise upon this Queen of Flowers, well adapted, in a cheap form, (twenty-five cents,) to encourage those who would know something about the Rose, preparatory to making a selection of varieties, and commencing their cultivation.

Who will not respond to the sentiment quoted by the author in his title-page?

"No flower that blows
Is like the Rose,
Nor scatters such perfume."

I do not think, indeed the publisher does not pretend, that this little hand-book is a complete and scientific history and classification of the infinite variety of the lovely family upon which it treats. Indeed, are not the offspring of the original species becoming as numerous as the stars? and who

of moderate modern cultivators wants more than a "select list" to select from? More than this, which itself generally numerates by hundreds, only confuses the beginner.

Having no room for quotations, the reader must be satisfied with a brief extract or so. Among the characteristics of a fine rose, the author gives—

"1st. The petals should be thick, broad, and smooth at their edges.

"2. The flower should be highly perfumed or fragrant.

"3. The flower should be double to the center, high on the crown, round in the outline, and regular in the disposition of the petals."

At the close of the book is a short treatise upon the Dahlia, from which the properties or requisites of a perfect flower are thus set forth:

"1. The general form should be that of about two-thirds of a sphere or globe. The rows of petals forming this globe should describe unbroken circles, lying over each other with evenness and regularity, and gradually diminishing until they approach the top. The petals comprising each succeeding row, should be spirally arranged and alternate, like the scales of the fir-cone, thereby concealing the joints, and making the circle more complete.

"2. The petals should be broad at the end, perfectly free from notch or indentation of any kind, firm in substance and smooth in texture. They should be bold and free, and gently cup, but never curl or quill, nor show the under sides; they should be of uniform size, and evenly expanded in each row, largest in the outer rows, and gradually diminishing until they approach the summit, when they should gently turn the reverse way, forming a neat and close center.

"3. The color should be dense and clear; in an edged flower, well-defined; and always penetrating through the petal.

"4. Size must be comparative."

This book may be found at Ward & Taylor's, where may also be seen a large collection of Horticultural works.

Another of these series is *The Cottage Bee-Keeper, by a Country Curate*; which contains suggestions for the practical management of apiaries upon scientific principles,

This pretty book has been laid upon the Editor's table by the amiable proprietors of No. 28 Fourth street, Messrs. Moore & Anderson, who also appear waking up to the importance of furnishing good readable matter to our reading country folks.

From the earliest historical eras, the habits and products of this curious insect must have attracted the attention and appetite of man; and yet it appears that comparatively little was known of their peculiarities until modern times. Even now, every year produces some new development, the result of observation and study.

Since the days of poor blind Huber, who was obliged to use another's eyes, though he, among the first, indicated to the world the wonderful economy of the Apian colonies, many have entered this attractive field of research, rich in sweet rewards; and we have, as the result, quite a number of bee-books. Among them, few can be more interesting than the volume now under inspection, which is so attractive that its pages occupy much more of my attention this evening than the paper which is patiently waiting for my pen's opinion of the book.

May it be so with others, and may they soon have an opportunity of testing the matter. Like bees and flowers, why may not bee-books and flower-men be consociated?

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SAXTON'S RURAL HAND-BOOKS.—This is a charming series of cheap and convenient books published by C. M. Saxton, the extensive agricultural book publisher of New York, and for sale in this city by Ward & Taylor, East Fourth street, to whom I am indebted for favors, among which, in this series, are "The Horse," "The Hog,"

"The Hive and Honey-Bee," and "The Domestic Fowl."

This series of useful books have been prepared from the originals of H. D. Richardson, and adapted to the wants of our people. The publisher says:

"The works of Richardson on the Hog, the Horse, the Bee, the Domestic Fowl, and the Pests of the Farm, are popular in England and in America, and, in evidence of their worth, meet with continued sale both here and there. Hitherto they have not been offered to the American public in an American dress; and the publisher presents them, in this reprint, adapted to American wants, and trusts that a discerning public will both buy and read these little treatises, so admirably adapted to all classes, and fitted by their size for the pocket, and thus readable at the fireside, on the road, and everywhere."

The volumes contain from seventy to one hundred pages each, and are filled with valuable information upon the topics they discuss, and they are handsomely and fully illustrated with numerous characteristic cuts.

They are furnished at twenty-five cents each, and all parties interested in these varied subjects are requested to call and judge for themselves. Not being strictly Horticultural, the Editor feels a diffidence in expressing unqualified admiration, nor is he prepared to criticise their merits in detail.

DR. DRAKE'S DISCOURSES—Not all of his discourses, for they have been many, during the last half century, and possessed of many beauties and much value—but his Discourses delivered by appointment, on January 9th and 10th, before the Cincinnati Medical Library Association; an institution which is not the first, but one of many in which this patriarch of medicine, with the true philosophy of his noble profession, has taken a deep interest.

In this little book may be found an interesting account of the infant colony, as it is

necessarily entwined about the history of its medical men; all of whom are brought into view, and described in the pleasant style of this distinguished author, who gilds with interest all that he touches.

One little horticultural article will attract the attention of the reader. It seems that the plateau of the upper part of the city formerly extended southwardly to the present line of Third street, and thence the slope of the gravelly bluff extended to Pearl street. On this slope, between Main and Walnut streets, a French political exile, named Menusier, planted a small vineyard in the latter part of the last century. This was the beginning of that cultivation for which the environs of our city have now become so distinguished. He adds, "I suppose this was the first cultivation of the foreign grape in the valley of the Ohio."

The book, though small, is full of interest, and is, in its appearance also, a creditable illustration of the enterprise of our publishers, *Moore & Anderson*. Regret has been expressed by some that its size, duodecimo, does not correspond with that of our medical libraries.

This is truly a Cincinnati book, by a Cincinnati man, full of Cincinnati incidents, and hence interesting to Cincinnatians.

CATALOGUE OF FRUIT TREES AND SEEDS OF VEGETABLES. Mons. Tougard: Rouen, France.

This gives an idea of the way the Horticultural business is conducted in *la belle France*. Some of our enterprising backwoodsmen are beginning to import largely from the Continent.

Besides the books and pamphlets already noticed, the Editor is indebted to Moore & Anderson, or the publishers, for the *MUCK-MANUAL*, a valuable compendium from Sax-

ton's prolific press. This work is too good to be passed slightly by, and is laid aside for more space and leisure to draw its portrait. Also, to the same obliging booksellers, for Putnam's new book by an American farmer, "WALKS AND TALKS," which is so attractive that itself prevented my writing its history.

Ward & Taylor have also furnished **RURAL ARCHITECTURE**, by L. F. Allen, of Black Rock. This is a book of homes for the farmer—simple, plain, yet beautiful, and with so decidedly an American air about it, that I anticipate being pleased with its perusal. I shall give the impressions in a future number.

NEW PUBLICATION.—*North American Sylva; or a Description of the Forest Trees of the United States, Canada, and Nova Scotia.* Illustrated by 156 finely colored copperplate engravings. 3 vols., royal octavo. From the French of F. ANDRE MICHAUX.

This beautiful and highly interesting work has recently been re-produced in Philadelphia, by Robert P. Smith, publisher, No. 15 Minor street. The engravings are from the original plates, and represent the foliage, flowers, and fruits of American trees, in life-like colors and delineations. Michaux, father and son, spent many years in this country, commissioned by the government of France to enrich that country with North American trees. They traversed this country in every direction, often guided only by the stars and the savages, and explored the treasures of its Sylva, from Hudson's Bay to Florida—from the Canadas to the Mississippi. The present work is one of the results of their immense labor, and its republication in this country can not but afford pleasure to every American interested in the advancement of the arts in the United States. "Arrangements have been made so

that the work can not be supplied through booksellers." It can be had of the publisher. Price \$24. O. D. P.

ABOUT TO ISSUE—From the establishment of Moore & Anderson, a new edition of Mr. Buchanan's "*Treatise upon the Vine and the Vineyards about Cincinnati.*" This has been much enlarged and improved, illustrated with wood-cuts, and brought down to embrace the latest information.

Western Periodicals.

THE OHIO JOURNAL OF EDUCATION.—Here we have a beautiful serial, devoted to the wants of the schools and the teachers. The April number fully sustains the enviable reputation it has obtained.

The address of Prof. Andrews, delivered at Columbus, before the Teachers' Association, in January last, occupies a prominent place. Mr. A. has made himself exceedingly useful in the state. May he be encouraged to go on!

This journal is especially the paper of the teachers and the schools. Let not our noble free schools suffer, nor let their excellent teachers suffer this periodical to languish for want of their aid and support! Columbus, Ohio. \$1.

THE FAMILY MIRROR—Is the name of a new, handsome and large weekly newspaper, printed in Carrollton, Kentucky, every Saturday. It is devoted to "morals, temperance, pure literature, agriculture, horticulture, commercial and general intelligence." Edited and published by S. L. Adams and T. D. Wright. Why should not Kentucky soil produce a domestic journal for her own people? Terms two dollars a year, in advance.

WESTERN REVIEW—Is the new title of an educational work by Th. Rainey, which has greatly improved in appearance and illustrations. Monthly: Cincinnati. \$1.

Editorial.

The Frontispiece.

THIS cut has been elaborately engraved by Winans, a young artist of our city, who means to make his mark. It has been finely worked by G. Tagart. Its object as a piece of composition, is to show at one view some of the different modes of training the grape, practiced in various portions of Europe. They are selected chiefly from Redding's valuable work on the vine.

Markets.

THE markets daily present a lovely and most attractive Horticultural Exhibition—quite a treat to the lovers of floral beauty.

The sales appear good, as immense numbers of plants are brought in, and they may be seen cheering the windows of pent-up cities, in every part of the town, and going away on every train and steamboat.

Large quantities of trees have been sold, so as to diminish the stocks in our nurseries; and as to grape-vines and cuttings, the supply has not been equal to the demand.

The Flood.

It is not often that the spring freshets of this river occurs so late, but the cause will appear to be very simple if we consult the meteorological tables. Dr. Ray said, in the Cincinnati Atlas, April 7th, that—"during the forty-eight hours from Saturday evening, April 3d, till Monday evening, April 5th, the amount of rain was *three inches and seventy-three hundredths*. Of this amount, nearly three inches (2.96) fell during the day, commencing at sunrise, April 4th. Some idea of this quantity may be formed when it is recollected that the average annual fall of rain at Cincinnati is about 48 inches. Thus in a single day, there fell a quantity of rain equal

to one-sixteenth of the whole amount that usually falls in a year."

Much damage has been done in the Mill-creek bottoms adjacent to this city, by back-water from the Ohio river. One thousand acres have been inundated above the second bridge, causing a loss of not less than ten thousand dollars. All the fine gardens in the bottom are for some time rendered useless. Many were compelled to remove from their premises. On the site of the old race-course, the gardeners have lost their hot-beds, and spring crops. The ground will not be tillable for some weeks; and the high water has covered the surface with logs and other drift, which must be removed at no small expense.

April 26th. The river is again at full flood. The great Pittsburgh rise is upon us, and the recent rains have kept all the streams full; so that within a fortnight we have had two great swells of our river, producing immense damage to the low grounds.

My kind friend, Dr. Ray, of Woodward High-School, has furnished the following data:

"By reference to the Meteorological Register, I find that the amount of rain in April, up to the present date, is 5.88 inches. This is nearly double the usual quantity.

"The mean temperature of the first twenty-five days I find is 49°. This is only 3° warmer than March. The mean temperature of April for the last seventeen years is 55°. This shows that the present month thus far has not only been unusually wet, but also unusually cold. It is, however, the same temperature as that of April, 1850, which, you will recollect, was unusually cold."

Floral Calendar for March.

THE vegetation has been very backward this season; but the following observations have been made:

Spring Flowers—Were scarce in the early part of the month. *Erigenia bulbosa*, and *Sanguinaria canadensis* were almost alone the forest rivals of the garden daffodil, on the 15th. The severe weather of the 20th set all aback; nor did these welcome day-stars venture forth again until the close of the month, when the following species appeared: *Arabis*, (*Rhondoidea*), *Erythrinum album*, *Pulmonaria virginica*, *Polemonium virginicum*, *Dentaria digitata*, *Anemone thalictroides*, *Enemion biternatum*, *Corydalis aurea*, *Dielytra cucullata*, *Jeffersonia diphylla*, *Trillium sessile*, and some others.

The water-maple (*Acer dasycarpum*) has lost all its flowers by the frost of March 20, and will have no seeds. The elms, also early bloomers, have set a portion of their winged seeds—enough to preserve the species, were there any lack.

On the 30th, the first pears, cherries, and plums, were seen to open, in the city.

Birds.—The pewee, the martin, and the large black-bird, (*Quiscalis versicolor*), made their appearance about the 15th.

Western Wine, and Western Policy.

DOMESTIC manufactures, when they savor of the luscious Catawba, may even suit the palates of our politicians, who are too often blinded to the admirable products of our own industry. An order for a large quantity of sparkling wines was recently received from New York, where it was wanted for a patriotic dinner in honor of Henry Clay.—It is sincerely hoped, that when the managers of our political destinies come to appreciate, as they must do, the quality of our Western wine, they will feel disposed to aid and foster our agriculture, manufac-

tures and commerce, by giving us a *Bureau of Protection*, and a new canal and other improvements to internal western navigation.

Louderback's American Prize Peaches.

OUR citizens have been much gratified by examining the beautiful bronze medal, awarded to M. J. Louderback, at the World's Fair, for his preserved peaches, which were declared to be better than any others from Europe or America. This is a great triumph for the West. It will be recollected that this fruit was exhibited at the Cincinnati Horticultural Society.

Dead Apple-Trees.

THE Wabash Gazette says, that the alarm respecting the apple-trees in that region, though not without foundation in their appearance, will not be followed by so great a loss as had been anticipated.

Fancy Floral Bouquets.

AT a recent floral ball in Dresden fans were distributed among the ladies, which were made of flowers, and so delicately wrought, that they could be opened and used like other fans. This happy fancy charmed the *beau monde*, and flower fans are all the rage in the Saxon capital.

A Beautiful Cottage for Sale.

As will appear by the advertisement on the inside of the cover, a charming residence is offered for sale. The beauties of the situation with its delightful prospects, and the admirable economic arrangements of the house, must be seen to be fully appreciated. A description was attempted in the last May number of this work, to which the reader is referred for further details. At present the picture and ground-plan on the cover are presented with the advertisement of the owner, to whom applicants are referred.

METEOROLOGICAL TABLE.

CINCINNATI, MARCH, 1852.

THERMOM.			WEATHER.			RAIN.	SNOW.	WINDS—REMARKS.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.			
1	37	65	cl'dy var	clear	clear			Light S, high at night.
2	35	38	cloudy	var	do			Brisk N W, light N W.
3	28	44	clear	clear	do			Light N E and E.
4	34	40	rain	rain	rain	2.00		Do E, calm. Thunder.
5	45	54	fog cl'dy	cloudy	cloudy			Calm, light N.
6	38	43	cloudy	var	clear			Light N, calm at night.
7	35	51	var	clear	do			Do N, light E.
8	49	66	cloudy	rain	var	.20		Calm, light S, high at night. Thunder.
9	50	64	rain	var	cloudy	.45		High S, brisk W.
10	41	48	cloudy	clear	clear			Light N W and N.
11	32	66	clear	do	do			Calm, light S.
12	47	64	cl'y. rain	cloudy	cloudy	.15		Light S E.
13	60	78	clear	var	var			Do S, brisk S, high at night.
14	67	72	var	clear	clear			Do S W, high S W.
15	48	66	clear	do	do			Do W, high S W and W, calm.
16	40	71	do	do	do			Calm, brisk S, high S, light S. Hazy.
17	32	47	cloudy	cloudy	snow		.45	Brisk N W.
18	23	34	clear	var	clear			Do N W, high W.
19	22	32	do	do	do			Do W, high W.
20	15	34	do	clear	do			Do W and S W and S.
21	34	43	snowcl'y	rain	var	.10	.30	Light S.
22	32	50	var	cloudy	cl'y. rain	.05		Do S and S W, high at night a short time.
23	35	40	do	var	var. rain	.15		Do W, calm at night.
24	42	57	do	do	clear			Do S W, brisk W, high N W, light W, calm.
25	38	78	clear	clear	do			Do S, brisk S, light S, calm. Martins appear.
26	64	82	haze cl'r	do	var			Do S, brisk S, light N W. Thunder at night.
27	39	41	rain	cl'y. rain	cloudy	1.05		Do N and N E.
28	40	54	cloudy	cloudy	var			Do S E, calm at night.
29	51	63	do	var	clear			Do S E, variable, calm.
30	64	72	var	clear	cl'y. rain	.90		Do S, brisk S, light S. Rain at night.
31	41	50	do	do	clear			Do W, brisk W, light S W.

Total.....Inches, 5.05 0.75
Rain and snow water in the month, ..Inches, 5.16

Mean temperature of the month.....				47.890
Do	do	March	1851.....	47.97
Do	do	do	1850.....	42.12
Do	do	do	1849.....	49.90
Do	do	do	1848.....	44.12
Do	do	do	1847.....	41.23
Do	do	do	1846.....	47.69
Do	do	do	1845.....	47.00
Do	do	of the above	.....	45.74

Clear days in the month..... 6
Variable, sun at times.....20
Cloudy, sun not visible..... 5

REMARKS.—The equinoctial period past over—as is usual in this locality—without any particular turbulence of the atmosphere. High winds, for a short time, have occurred on eight days or nights, and may answer the description of *squalls*, but not what is usually understood as a *storm*.

The quantity of rain is somewhat above the usual average for the month of March.

The mean temperature of the month, it will be perceived, is about two degrees above the mean of this month for the last eight years.

JOHN LEA.

At the close of his table, in the Cincinnati Atlas, Dr. Ray observes: "Considering that it was March, the greater part of the month has been pleasant—more so than March usually is. The only feature deserving of special notice was the sudden and great changes of temperature. This, in several cases, amounted to more than forty degrees in twenty-four hours. In some cases these changes were from warm to cold, which are always the most severely felt, and in others from cold to warm. An examination of the table will show the most of these changes, but we will point out two that occurred together. On the 5th during the eight hours commencing with 6 A. M., the temperature rose 44 degrees, and on the 26th, during the sixteen hours following 2 P. M., it fell 48 degrees.

"The warm weather preceding the 16th, and the very cold weather from the 17th to the 21st, which was several degrees colder than the coldest in February, was the only part of the month calculated to injure the fruit-buds—14°. We are not yet, however, informed of the effect.

"The mean temperature of the month is about three degrees higher than the average, and the amount of rain is nearly one-half more than the usual quantity."



Univ. of
California



SEVENTH PRESBYTERIAN CHURCH.
BROADWAY, CINCINNATI.



Vol. II.

JUNE, 1852.

No. 9.

Miscellaneous.

HORTICULTURE.

Extracts from an Address to the Franklin County Agricultural Society.

(At Brookville, Indiana, May 1st, 1852.)

BY THE EDITOR.

"A BUCKETE WELCOME," is an expression which has passed into a proverb; but what shall be said of a HOOSIER WELCOME? what have we, who reside beyond that arbitrary line of civil geography, which is not also equally possessed by you upon this side?—You also have a broad extent of fertile soil, based upon the same excellent old rock foundations; valuable forests clothe your lands as well as ours; and the surface, here as well as there, is diversified with all the variations of hill and dale, ridge and valley, plains and prairie, and watered by the most valuable streams, that drive your water-wheels, and then submit to bear the products to distant markets. Indeed, with all the boasted extent of cornfields on the Scioto and the Miami, what have they to show more lovely and beautiful than the vale of the Whitewater! It is doubtful whether any stream in Ohio can furnish more of that kind of beautiful scenery, and at the same

time a very productive soil and comfortable homesteads, with excellent communication accessible both by land and by water.

But, lest comparisons become disagreeable, allow me simply to state, that I felt the outpouring of Hoosier hospitality from the moment of crossing the state line—when the graceful slopes and terraces of the very hills seemed to open their hearts to greet me. And now I cheerfully accept your welcome, gentlemen of the Franklin County Agricultural Society!

I have heard of your meetings, I have read of your doings—and have promised myself the pleasure of seeing and of hearing you ere this, and had intended to enjoy those pleasures at your last meeting, when, self-invited, but certain of a welcome, it had been my intention to have come among you, to listen quietly to your teachings; not intending to take any prominent position, being wholly unaccustomed to such efforts as this, and feeling sensibly the force of Tupper's couplet—

"Speech is the golden harvest that followeth the flowering of thought,
Yet oftentimes runneth it to husk, and the grains be
withered and scanty."

True—speech is and should be the *harvest*, rich in ripe grain well matured, nutritious and valuable, not the frothy exudations, too often met with everywhere, falling from the lips of every stripling, sometimes very well-sounding, in smooth cadences of well turned sentences, tickling the ear, as the delicate morsel the palate, but which, when written out and left until the ink shall have become dry, present nothing but light, worthless chaff, or “husks whereof the grains be withered and scanty.”

You have presented, among the *topics* for discussion, “*THAT OTHER FARM*,” or deep plowing, and for my especial benefit, perhaps, *HORTICULTURE GENERALLY*.

You may, and doubtless will expect me to take up the latter topic announced—as it is more particularly in the line of my interests and occupations—*HORTICULTURE GENERALLY*. This theme is really so very general, and, in itself, so extensive, covering so wide a field, (though all in a *garden*,) that it is difficult to know where to begin its treatment.

HORTICULTURE, or the art of making and tending a garden, is an ancient and honorable, aye, it was at *first* a beatific and paradisaean occupation: Adam was placed in the Garden of Eden, to enjoy its pristine glorious productions, which he no doubt tended with pious care. Since his expulsion from that Elysium, in the very early periods of man's existence on the earth, it must have become necessary to cultivate some of the soil, at least about the time of the earliest buildings, or so soon as men began to fix themselves in local habitations. The first subjects of the early gardeners' cares must have been those vegetables which would contribute to their support as food, or to relieve their suffering as medicines; for thus men were relieved from laborious and uncertain

search for them in the meadows, forests and rude mountain sides. Various fruits would next receive attention: hence very soon it became necessary to make inclosures to protect the products; these constituted the first gardens.

We have, however, very little recorded information respecting the early history of this art,—as an art, indeed, it must be classed among the moderns; for though we read of gardens in the sacred scriptures, little has been told us of their products or management. The wonderful hanging gardens of Babylon were exceedingly elaborate structures, erected at an enormous expense, but, so far as appears, they were rather parks than gardens.

The Romans had formed quite a collection of fruits, embracing varieties gathered from the different lands which became subject to their conquering armies; they also possessed the art of propagating by grafting; they understood the necessity of pruning; and, in the days of their splendid luxuriousness, they appear to have applied *artificial heat*, to some extent, in forcing fruits and vegetables out of season. Their extravagance in roses was remarkable.

England very soon became famous for her gardens, and has furnished some of the best early writers upon Horticulture, who are quoted even now by those who are doing and have done so much for the advancement and improvement of the art. Among the greatest efforts for its melioration, the associative action has been conspicuous, in the very numerous organizations since the founding of the London Horticultural Society, in 1805.

The Dutch, upon their low lands, which are celebrated the world over for their monotonous flatness and high farming, which is the most perfect of any in Europe, have also been as celebrated for the perfection of their

gardening. Here raged the *tulip-mania*, and fortunes have been invested in this bulb, with its brilliant and short-lived flower. Here too the greatest progress has been made in cultivating that delicious fruit, the pear.

The French have always been anxious to receive, and they deserve, the meed of praise for their gardens, which, though stiff and formal in their style, as those of Belgium, have been wonderfully prolific in new varieties. There the *rose* is the queen of flowers—a title, by the by, which is deserved the world over, as much as in La Belle France.

But of all lands, and among all people, the Chinese are said to bear the palm as gardeners. Their whole agriculture is, indeed, nothing but gardening. They are particularly remarkable for their excellent and prudent care of manures, and teach a very good lesson to all in this respect. The exquisite talent with them, however, is one which appears ridiculous to us—it consists in their fashion of *dwarfing* plants to their smallest possible proportions, and contorting them into the most grotesque forms.

Horticulture, though an early art, and long pursued with a reasonable degree of success, like its kindred or other and larger self, *agriculture*, is also dependent upon the different branches of science for a great amount of its valuable data and knowledge, and must depend upon them for the true guides to success. To be sure, both these are *primitive occupations*, and were long pursued by men who had no knowledge of any science; and even now, there are many persons, called good farmers and good gardeners, who can boast of more success in the results of their pursuits, than scientific information; but such men will be found to be close observers of the very phenomena that occupy the attention of their proper scientific allies—the chemist, meteorologist,

and botanist—who laboriously and critically examine, analyze nature, and classify the knowledge thus obtained, for the benefit of the producing class.

The chemist has especially rendered great service in modern times, by telling us why certain soils were fitted for particular crops, or otherwise; whether they contained the necessary elements for the support of the plants, or some substance that was injurious to them, and then indicated, in each case, the proper sustenance to be supplied as manures, or the antidote for the poison.

To the meteorologist we owe much, on account of the knowledge of climate to be derived from the results of the long continued record of careful observations, from which we learn to know the “signs of the times,” and are often enabled to avoid the evil effects of unlooked for changes. The *signs*, however, are very uncertain: hence much superstition, even in this day, (but formerly more,) has possessed the minds of men in regard to the influence of the moon, the planets, etc. Now all this is fast disappearing before the observed results, which do not support the absurd dogmas of the *theorists*.

The geologist indicates many useful hints and conveys much valuable information to the farmer and gardener, by the knowledge he possesses respecting the stratification of the rock formations and the elements they contain that may be beneficial to vegetation. But as soils are not always derived from the rocks immediately subjacent, he also studies, for our benefit, the position and constitution of the drift formations, such as those which are characteristic of your valley, forming extended terraces like this upon which your town is built.

To the botanist we have been laid under the greatest obligations for his invaluable contributions, not merely in new and rare

beautiful flowers, the admirable systematic classification of plants, but, more especially, for the information furnished respecting *vegetable physiology*, the inner life of plants, their composition, modes of growth, and support, the various means and principles of propagation, methods of improvement by crossing varieties, and many other interesting matters connected with their history.

These things constitute *SCIENCE*, the bugbear and scarecrow of farmers—but which is really nothing but their own and others' observations and knowledge, eliminated and systematized for *their use and benefit*.

Thus, from a hasty glance, you must already have perceived that it would be quite impossible for me to traverse the whole extent of this world-wide field, and to observe or notice a tithe of its interesting topics; nor would it be at all profitable to undertake such an object, and attempt to compress the results into one lecture upon *Horticulture*.

To render the occasion upon which we have met as profitable as we can, let us take a glance at the connection between this handmaid of agriculture and the farmers of our country. Let us see how it concerns *them*—let us see whether it should attract and receive *their* serious attention! I shall assume:

1st. That the pursuit exerts an important *moral influence* upon the agricultural community.

2d. That a *garden* will produce a large amount of food, of very healthy character.

3d. That the *orchard* and *vineyard*, coming properly within the province of Horticulture, will contribute very largely to the amount of the products and profits of the *farm*.

The pursuit of Horticulture is calculated to exert a very happy moral influence in several ways. In the first place, the cultivation of the soil itself is an ennobling occupation. Training the shrubs and tender shoots of the young growth, and protecting

them from injury, is a practical exercise of our benevolence, and a lesson of forethought. What can be more a sermon upon faith and hope, than the act of committing the dry seed to the earth, in full confidence that its fruitful bosom, when supplied with the genial shower, fostered by the kindling influences of the warm sunlight, and supported by the nightly dews, and the early and latter rain, will yield to us a certain and a multifold return!—fit emblem indeed of *faith*, is this act of seed-sowing.

Then, again, consider the home feelings which are fostered and encouraged by the cultivation of the garden, shrubbery, and orchard—and all will admit that whatever increases the attractions of Home can not fail to exert a fine moral influence upon the young and the old.

In passing through the country, who has not observed the great difference in the appearance of the door-yards of the dwellings? And does not every person feel disposed to draw his own conclusions of the state of civilization and morality of the inmates even of the plainest cabin, from the manner in which this part of the domain is kept? Do we not always feel impelled to decide, on the score of morals at least, in favor of the shaded cottage, with its bowered lattice, or even the log cabin with a simple wild rose trained over the door and shading its window, rather than the large and expensive mansion of white boards or red bricks, which has stood for years, staring upon the road, without a tree, or shrub, or twining vine to break its hard outline and bare front!

The *poet of nature*, and good morals, COWPER, appears to have fully understood the moral influences and refining effects of these pursuits; in his cantos to the garden, a part of that admirable production called

The Task, after speaking of these influences, makes this apostrophe :—

“ Domestic happiness, thou only bliss
Of Paradise, that has survived the fall !

* * * * *
Thou art the nurse of Virtue, in thine arms
She smiles, appearing, as in truth she is,
Heaven-born, and destined to the skies again !”

It is said, that one of the chief charms of England, to a traveler, consists in the ivy-covered walls, the eglantine and woodbine-embowered windows of its country residences. Would that such demonstrations of good taste and good morals were infinitely more frequently to be met with in our own happy country !

I cannot forego the opportunity to assure you that infinite pleasure was afforded in my ride yesterday through this beautiful vale, (the breezes freighted with orchard odors,) by the scattered evidences of good taste and right feeling frequently met, and seeming only to need the fostering care of your Association to develop them to a happy result. This idea may be here pursued, especially in reference to the cultivation of *evergreens*, whose value as a protection from the rude blasts of winter, to our cattle as well as to ourselves, has been too much overlooked. An artificial temperature is created by these terebinthinate trees, which is astonishingly more temperate than that in exposed situations.

It has often been said, that a good garden is capable of yielding one-half of a family's living—or, that it will furnish so much toward it. I believe every word of that saying—having realized it myself—and that too when almost everything was done with my own hands, using a horse for a small part of one half-day each week, and occupying the spare minutes while waiting for the bell at meal-times ; others have no doubt done the same thing. But suppose that a whole day's work in each week be requisite, still

the large amount of produce yielded is amply remunerative, and should always be freely granted by the farmer, were it only to please his good wife ; for the women are always well-convinced of the necessity and advantages of a garden, and are often the only operatives in this nook of the farm.

Nor is it simply the *amount* of food thus furnished that should be taken into the account ; and this is worthy of consideration, for the average amount of nutriment consumed by each individual is about the same, and, if a large proportion is of domestic origin, there is so much less of the purchased matters to be procured. Besides, the healthiness of these vegetable products of the garden must not be overlooked ; man is omnivorous, and never enjoys so good health as when upon a mixed diet.

As to fruits, they should be cultivated by every farmer, whether for sale or for home-consumption. I mean every kind of fruit that can be profitably or advantageously cultivated upon his soil. Few farmers neglect the apple—we see orchards everywhere in the middle and northern parts of the temperate zone, except, indeed, where the broad savannas tempt the cultivator to grow too large crops of any one kind of grain.

I have said that apple orchards were common appendages to the farms, but it is an important question, whether the farmers have ever rightly appreciated the value of apples *as food for stock*. This subject has attracted considerable attention within a few years, and is worthy of your serious consideration. You are referred to a list of sweet apples, for this purpose, so selected that they should ripen in succession, which was printed in the first volume of the *Western Horticultural Review*. For a judicious selection of the best sorts you must look to the pomologists.

A single acre of grapes has been known to furnish fruit enough for making one thousand gallons of wine, which, if of good quality, will command as many dollars. This, however, is an unusual crop, and should not be taken as an estimate of the probable yield of the grape; three hundred gallons is indeed a large yield, but that is a good return; and near a town like this, or even upon a farm for family use, every one should cultivate the grape, were it but a single vine—if he have a surplus, it will always command a market at a fair price.

[Several extracts were then read from J. J. Thomas' Fruit Culturist, showing the profits of fruit-growing.]

My learned and excellent friend, Dr. J. A. Kennicott, of northern Illinois, who is high authority in such matters, makes the following suggestion in the Wisconsin Farmer:

"The free use of ripe fruits not only *prevents disease*, but their regulated enjoyment often helps to remove that which already exists. All ripe fruits are, also, more or less nutritious. Professor Salisbury has clearly demonstrated that the APPLE is superior to the POTATO, in the principles that go to increase the muscle and the *brain* of man—and in fattening properties, it is nearly equal to that plague-stricken tuber, when cooked for swine, or fed raw to other domestic animals.

I can not put the average annual income of one hundred well selected, and carefully cultivated apple-trees, at less than \$250.

"We will suppose the land worth \$15 per acre and about an acre is enough for one hundred trees, where fruit is to be the only crop, after the trees come into bearing. The calculation will then stand, on a safe estimate, about thus:

Land	\$15 00
Picket fence	25 00
One hundred selected trees	15 00
Average cost of transportation	5 00
Preparing the ground	5 00
Planting and mulching	10 00
Interest account, (ten years)	75 00
Cultivation and manure, do.	50 00
	<hr/>
	\$200 00

"Here, on this small scale—which will cost near twice as much, in proportion, as an orchard of twenty acres—and without deducting a cent for the vegetables and corn you *should* raise between the trees, during the first five years, and the fruit you may gather from them, during the last five—you have only four-fifths of the estimated value of *one* average crop of fruit; and the entire after expense of interest on outlay, manure, cultivation, and gathering, and marketing the crop, will not exceed some twenty-five to thirty-five dollars per year; leaving a clear income of over two hundred dollars, from one hundred trees. And I will add, from my own experience, and a hundred recorded cases, that I have no doubt, that, under favorable circumstances, the value of the produce of fruit, and other suitable crops, during *the first ten years*, will pay all expenses, and leave the orchard clear of cost to the proprietor."

[Edson Harkness was next quoted in his excellent "Six Reasons for Planting an Orchard." See p. 326.]

In conclusion, my friends, I feel constrained to ask your kind and gentle forgiveness of errors, whether of commission or of omission. As already hinted, my other engagements are very pressing, and if this address, though not by any means elaborate, (necessarily otherwise,)—still if this attempt "smells of the lamp," it is because necessity required the use of such a luminary; no daylight has been occupied in its preparation, for the very good reason that none was to be spared from other things having stronger claims than even my kind friends of Franklin county here assembled:—To whom, one and all, I must be allowed to return my thanks for their respectful attention, and to whom, if I have imparted the least zeal in the cause, or stimulated any to exert themselves in the delightful pursuit of Horticulture, it will be a source of congratulation to one who is devoted to forwarding this charming department of the rural occupation of our people.

THE ENVIRONS OF CINCINNATI.

"Ever charming, ever new—
When will the landscape tire the view?"

Few people ever had so much beauty and pleasure in scenery within their reach, and enjoy it so little, as the inhabitants of Cincinnati. The Bay of Naples and the Harbor of New York are justly celebrated for the picturesque variety and brilliant coloring in their scenes, constantly exciting a lively interest. Yet, even those delightful scenes are scarcely superior to many which are beheld in a clear morning, or by setting sun, from our surrounding hill-tops. Some years since we rode over the northern summits with a Prussian gentleman of education, who frequently expressed the most unqualified admiration of the continually varying views, the graceful hill-curves, and the fresh coloring of nature, as we rode among the suburban villages. Time has not diminished the beauty of the scene; but the busy citizens seldom find one hour to enjoy it. At times we have stood on the point beyond the Observatory, and seen many a stranger cast wondering and delighted eyes over the beautiful and graceful turns of the Ohio, but rarely have we seen the industrious citizen leave his shop or store for a pleasure he may travel far and long for without meeting.

Within a few years, however, omnibusses have commenced running on several routes over the hills, and afford a cheap means of air and exercise; and, even in default of an omnibus, one would think the hill-tops are not entirely beyond the pedestrian powers of our young men and maidens. At any rate, we can assure them that there is enough there to charm duller tastes, and awaken more callous feelings, than we think they possess.

A few days since, we went up Vine street, and turning to the left, passed over the rolling summits which extend from Vine to Plum. The city has begun to extend rapidly in that direction, carrying along with it many substantial improvements, and cutting down those rugged and uncomely bluffs which presented mere cliffs of clay between the city below and the green sward beyond. Who, as he looked at these a few years since, would have supposed that the hills would be cut down, and the vales filled, till

streets and houses should ascend that cliff! Yet, such is the process through which the town is passing; and though slow, it is certain. Already the smoke covered houses begin to ascend the brows of hills, and soon we shall have the city of dwellings there, looking down upon the mighty throng of busy, restless, industrious mortals, in their shops and stores below!

We passed on the hight between Elm and Plum streets continued, and gazed on the distant river, the crowded city, and the blue hills beyond. Far to the west, a broad sweep of the Ohio was visible—soon disappearing amid hills and woods. Then came Mill creek and its bridge; then, on the plain which, ten years since, was only open fields, came the thick houses and the curling smoke—the rail-road station—the church spire—the thick throng of business, and the roar of many voices, ascending like the hum of a distant world! But it was on the north where the more mild and beautiful picture lay inclosed, between the azure above and the green ground near by. The hills on the north of Cincinnati, the observer will readily see, decline on every side, so that Mount Auburn is nearly the crown of a land island—a geological island—round which the waters once probably flowed. At any rate, where we now stood, near the head of Elm street, the ground declines northwardly toward the gentle vale of Mill creek—a lovelier one, *we*, who saw it in its wild deer and wild wood's youth, think, never was; in long sloping ridges and rounded hills—miles beyond, toward Carthage, and Sharpsburg, and Sharon—the blue hills, with woody summits, bound the view. The scope of this picture early in spring, or late in autumn, (when the leaves are not thick,) is, perhaps, eight or ten miles; and there are few spots in our country where a strictly *inland* view contains so much of the picturesque and the charming. It is so soft, so gentle and peaceful in its aspect, that not a rough cliff nor a sharp angle meets you in the whole horizon of view. Scattered about, there are already some habitations of our German residents. As they build their homes on these over-

looking hills, are they not thinking of their own loved Rhine?

We are told that some public improvements are to be made in this neighborhood, and already we see the various streets west of Vine slowly creeping up through the ravines, among the hills. In reference to the future Cincinnati—the metropolis of half a million—the hills on the north and near Race will probably be in the midst of the city. The ten years to come will be years of rapid growth, and those who wish to flee from the dust and noise of a great shop, ringing with the sounds of work and business, must soon hasten from the plain. Even when built up, these sites on the hills can not be deprived of their great characteristic—the lovely distant view. The citizen there can not be deprived of the consoling conviction, that he yet lives amidst the scenery of nature, and can converse with the works of God.

One thing we do most earnestly wish—that they who lay out lots and streets on the hills, will lay them out with more regard to space and air than has been done in the city. And why not set aside some public grounds? No greater mistake was ever made in the practical affairs of Cincinnati, than in not securing one or more public squares. But that is done, and gone into history. Let us correct the mistake on the hills.

We must now bid adieu for the present to the Vine street hills. If our readers can not build amidst these suburban sites, they can walk or ride there, and look out upon scenes which, if they could not enjoy them at home, would reward the labors of a long journey to behold.—*Cin. Gazette.*

Exploration of the Interior of Africa.

ONE of the missionaries to Liberia lately made an exploring tour of 253 miles on foot into the interior. He passed through thirty villages of the Goulahs, Deys, Queaks, and Condoes. In his report, he says:

“Such a country as we passed through in that missionary tour, I have not seen surpassed in either of the fifteen West India Islands which I have visited, from Trinidad to Tortola and the Virgin Island. It is an elevated, mountainous country. Ranges of mountains running most generally parallel with the line of the coast—from north-west

to south-west—rise up before the delighted eye of the traveler, convincing him that he is no longer in the land of burning sands, and deleterious swamps, such as are encountered in proximity with the shores, but in quite another region. And such are the gradual undulations of its surface as would greatly facilitate the objects of agriculture. There are few, if any, very steep acclivities—nothing like the bold, precipitous mountains of our Eastern States. Beautiful and extensive valleys lie at the base of these mountains, which gently slope down to the level country lying between them.

“It is a well watered country. During the eight hours’ travel which we were frequently obliged to perform in a day, we never walked more than two hours, or two and a half, at one time, without coming to some beautiful stream of cool and very pure water, either a tributary of the St. Paul’s or some other of the many smaller rivers which intersect that African Canaan. And here it may be proper to add that my attention was directed to an examination of the adaptation of these streams to the purpose of machinery, sites for mills, etc.; and I hesitate not to affirm, that, within the Goulah country especially, any number of the most eligible situations may be found, where at any time during the year good water-power may be obtained, for any of the purposes which an enterprising community of agriculturists and mechanics may require. My journey was performed in the very middle of the dry season, and yet we found plenty of water in the different streams.

“It is a well timbered land. Through an extensive forest of acres of miles which lay in our return route, I was so struck with the gigantic trees of immense height, which reared their towering heads, and united their luxuriant foliage in forming above us one dense and rich canopy, that I called the attention of the colored ministers of the Liberia Annual Methodist Conference, who accompanied me, to this evidence of the richness of the country which God had given to the Africans, and to which their exiled brethren were invited by so many powerful considerations. I measured several trees, and my journal, kept at the time with scrupulous exactness, records 23, 24, 25 feet, as the circumference of many of them within six feet of the ground. Let me remark, that the

variety and superior quality of the wood found in these forests, and indeed all along the borders and around the settlement of Liberia, from Grand Cape Mount to Cape Palmas, or Maryland, cannot be excelled any where within the torrid zone. From a species of poplar, soft and adapted to all the purposes for which the white pine is used in America, up to the teak, a variety of mahogany, a beautiful species of hickory very abundant at Cape Palmas, the iron-wood, the brimstone, susceptible of a polish for furniture of surpassing beauty, and many others, an almost endless supply may be found.

"It is an exceedingly fertile soil. The immense undergrowth of shrub and vine interwoven around the giants of the forest—so thick, so impenetrable, except with much effort, and through which a foot-path only conducts the traveler—is the best proof of this. But the grains, roots, fruits, vines of the tropics, all concenter here, and may be raised with a degree of comparative ease, a rapidity of growth, and an abundance almost incredible. I have stood erect under the branches of a cotton-plant in a Goulah village, as they spread forth from the main trunk, laden with bolls, and supported by forked sticks to prevent their being broken down by their own weight, and found, on measuring, that the tree covered a space of ten feet in diameter. On examining the staple, as the ripened bolls burst into maturity,

it was found as good and equal in the fineness of its fiber to the cotton of any country. As to coffee, I will only borrow the words of the report as a comment on themselves: 'Coffee of a quality superior to the best Java or Mocha is raised in Liberia, and can be cultivated with great ease to any extent.'

"It is a country where tobacco, that great article of commerce, may be cultivated in any quantity with great success.

"But the region in the vicinity of Liberia is one of great mineral wealth. This remains for science fully to develop, but we may confidently arrive at this conclusion, from what has been discovered. Of the gold coast your committee say right, when they assert that 'England has received altogether \$200,000,000 of gold from Africa. Liberia is adjacent to the Gold Coast.' But I would speak of what is better than gold—iron. And such is the purity of the iron ore obtained by the natives of Africa immediately in the vicinity of Liberia, which they describe as being abundant, that they have no furnaces; they need none. All their rude agricultural and warlike instruments are made by them of ore so pure, that when heated, it becomes at once sufficiently malleable to admit of being wrought into any shape or form. They make knives, bill-hooks, war cutlasses, spears, axes, hoes, etc., out of this ore, without the process of smelting."—*Liberia Advocate*.

ORIGINAL TYPES OF ANIMAL AND VEGETABLE LIFE

CREATED FOR THE USE OF MAN.

In perusing the works of the most celebrated authors on natural history, it will be found that they all look for the original types of our most useful animal and vegetable productions, in some similar species now or formerly found in a wild state in some part of the globe.

The difficulty of finding this, in many, if not in every instance, has given rise to innumerable theories and surmises. Very few authors, for instance, have agreed upon what was the original parentage of our domestic cattle, sheep, etc.; while in the vege-

table kingdom there has been as much diversity of opinion as to the origin of our principal grains and fruits, and at what time man by his skill and continued culture began to change them into their supposed present improved condition. In one or two cases we notice an agreement upon the original parent or type of some fruits or other productions—such as, that the "austere crab-apple of the hedges" is our cultivated apple in its wild state, that the sloe is the original of the plum, and that the pear of our gardens is sprung from the common wild pear

of Europe, (*Pyrus communis*,) a fruit that, from its harshness, it is impossible to use in any way. But in what manner these were at first meliorated, and by what progressive stages they have been brought to their present perfection, none have attempted to show.

Nor has it ever been demonstrated by the most skillful cultivator that these wild fruits are capable of being improved in any degree whatever: on the contrary, it is next to certain that unless hybridized with our domesticated fruits, they would always remain the same, generation after generation, in spite of all human skill and culture.

That hybridization has been the original cause of improvement is supposed by some; but if all the species were originally as inferior as the crab, the sloe and the wild pear, with what were they to be hybridized so as to improve them? For instance, what was the crab-apple crossed with, so as to form the fine fruit at present cultivated as the apple?

It would appear that the author of "Vestiges of the Creation" has merely adopted the views of the great bulk of the writers on natural history, and has brought them into a tangible shape. They think, if we may judge from their writings, that all things have been created in an inferior state, and have been gradually improved upon by man's care and culture, till now it is not easy to recognize the production in its original type. The author of "Vestiges" has improved upon this, in so far that he does not give man the credit of having any share in the improvement, but has laid it to some inherent power in nature which has been at work long before man existed, or rather from chaos, and by which all animal and vegetable life has been gradually changed into a higher organization, and even man must have sprung from some inferior state. It is needless to combat these theories of

the author of "Vestiges." Their fallacy has been already shown by able writers, the most successful of whom, (Hugh Miller,) in his "Foot-Prints of the Creator," has sufficiently proved that the earliest kinds of antediluvian animal life were always the most perfect of their kind, and that after-creations were smaller and less perfect, till a new era came in, bringing some different form of life to suit the changing state of the earth.

If we apply this theory to the present inhabitants and productions of the earth, we shall probably find the true solution of all the difficulties of naturalists—viz., that instead of all things being created in an inferior state, and afterward improved upon by man subjecting them to domestication, all things were created in the highest state of perfection: and that instead of man improving upon them, they have degenerated, as man has done since the fall.

None who believe the Bible will dispute that man was created in a greater state of perfection than he has ever attained since the fall, and why should not such have been the case with the animal and vegetable kingdom intended for the food and use of man?

We are told in the sacred scriptures that "the Lord God planted a garden eastward in Eden," and that he made to grow out of the ground of it "every tree that is pleasant to the sight, and good for food," of which man was told he might freely eat.

Are we to suppose that the Lord only planted what are now supposed to be the original of the fruits now in use, and that Adam had to use for food the crab, the sloe, the wild pear, or other similar inferior types of fruit? On the contrary, we must suppose the very reverse, if we believe sacred history; for after the Lord had created all things, and given man dominion over them, and appointed what he should use for food, "he saw everything he had made, and, be-

hold, it was very good :” from which we may well infer that all was good and well adapted for the purposes intended.

After our first parents were expelled from Paradise, Adam was set to till the ground, from which he was in future to obtain his food. By the phrase, tilling the ground, we must infer that grain was raised for food : if so, was it some of the supposed worthless types of our present grains ? or was what Adam reaped, in as great or greater perfection than those cultivated at present ? The latter is the more reasonable idea.

It is more natural to suppose that the Lord God made everything originally in the greatest state of perfection possible, and that the deterioration that has taken place in these things since, has been caused by the evils attending upon man’s fall, and by the continued wickedness of man. True, our horticulturists and agriculturists are gradually improving upon fruits, grains, and domestic animals ; but it is more likely that they are bringing them back nearer to their created types, than that they were created inferior, and have since been meliorated and improved by man.

Cain followed the occupation of his father, and was a tiller of the soil, while Abel was a keeper of sheep. We are not told what other animals were domesticated then, but it is natural to suppose that all that were necessary for man were domesticated, and we see that in the sixth generation from Cain, Jubal “was the father of those who dwelt in tents, and had cattle.” Cattle may be here understood as the generic term for oxen, sheep, camels, etc. We may therefore infer, without in any way stretching a point to favor a theory, that all animals, grains, and fruits necessary for man’s use, were in a state of domestication and cultivation from the beginning, and that it is therefore needless to search for the original types

of those now cultivated, in a wild state, for they never were wild. In fact, *the present are the original types*, modified and altered from the original only so far as might be occasioned by the degrees of care and attention given to them by the different families of the earth. A nation preserving a considerable portion of civilization would preserve their animals, fruits, etc., in a superior state, while a people degenerating into barbarism would allow them to degenerate with them.

We might as well say that the Australian or South Sea Island savages are the original type of man, as affirm that the apple has sprung from the crab, or the ox from the European bison, or from the urus. The savage races of men are commonly said to be in a state of nature, or, in other words, in a primitive state. A greater abuse of the true meaning of the word nature could not be made ; so far from being in a state of nature, they are in a state of the greatest degradation from the natural or primitive state.

We know that by proper means, and through the ennobling influences of the gospel, these savages can be raised from their degraded state, to the highest state of perfection, as the ancient Britons, (who were equally degraded,) have been raised to be the progenitors of the two most civilized nations on the earth. So with regard to animals, fruits, grains, etc. That many of the same species, as those at present domesticated, are to be found wild, of an inferior quality, is undeniable ; but that these are in the natural or original state, any more than is the Australian savage, we believe to be quite untenable. They have rather degenerated from the original state through lack of care or cultivation, and may be brought up again toward their primitive level by the domestication or cultivation now going on ; but that they can be improved

upon to a higher state of perfection than those originally created, or even than those preserved by Noah in the ark, from which all must have sprung, is what must be doubted, we think, by every candid mind.

Noah, by the Lord's command, preserved in the ark, during the flood, specimens of all animal life ; he was also ordered to take "of all food that is eaten," to be for food to him and to them, and we are told that Noah did "according to all that God commanded him." These animals must have been among the most perfect of their kind, and, of course, must all have been in a complete state of domestication while in the ark. After the subsidence of the flood, Noah would, no doubt, turn out all not required for man's immediate use, to shift for themselves, and such would, no doubt, soon become wild ; but, he would require for his own use all of those that were used by man, such as the ox, sheep, goat, camel, and probably the horse and the ass. These would, therefore, all be kept by him and his posterity, in a state of domestication, which accounts for their never having been found yet in a wild state, except under such circumstances as made it evident that they had sprung from domesticated animals, such as the wild horses in Asia, South America, and Mexico, and the wild cattle of Britain and of South America.

With regard to the food preserved in the ark, it is more than probable that it was not merely to be for food during the time of the flood, but that a portion of it was to be preserved for the purpose of planting it to continue the kind. The seeds of many kinds of trees and plants would undoubtedly remain uninjured in the ground during the flood, and would spring up when the land dried. But that the seeds of the principal kinds used by man for food, such as grain of all kinds, would have remained under the waters and been in a state fitted for vegeta-

tion at the end of a year, during which time the flood lasted, unless by miraculous interposition, is very much to be doubted. And as it had already been preserved by miraculous interposition in the ark, there is no ground to suppose that it was preserved miraculously out of it. These grains have therefore been in a state of cultivation ever since the flood, and it is not surprising that they are not to be found in a wild state, except such as have degenerated from the cultivated state, in the same manner as the animals. The seeds of the finest fruits designed for man's use, may, and no doubt were, preserved by Noah, and planted afterward.

A writer on the grape, quotes from the scriptures, that "Noah began to be an husbandman, and he planted a vineyard," from which he infers that Noah found the vine growing wild, near to where the ark landed ; but it is more likely that Noah preserved the seeds of grapes taken into the ark as food than that he found them wild. The term, "began to be an husbandman," may imply his cultivating all things necessary or good for man's use. Many important things done by Noah, owing to the necessary brevity of the scriptures, have not been recorded, and it is probable that the planting of the vineyard would not have been mentioned, had Noah not become drunken on the wine made from it, and on account of the importance of the incident growing out of it, by which Ham's descendants through Canaan were cursed.

It is thus perfectly consistent with sacred history, to suppose that Noah had all these animals domesticated, and the good fruits and grains under cultivation, though it was not necessary to particularize the statement in scripture.

These views will probably not be disputed by nine-tenths of mankind ; but botanists, zoologists, horticulturists, and other learned men are peculiarly constituted, and the

theory herein detailed is not at all likely to be well received by them. They will doubtless continue, as heretofore, to strain at a gnat and swallow a camel, in the beaten track of science, sometimes falsely so-called.

J. D.

WINDSOR, C. W., April 29, 1852.

The Transplanted Rose.

IN a beautiful recess, formed by the interwreathed branches of a thick wood, there once grew together a company of flowers.—Though they were of several kinds, they lived in great friendship with each other, and as they burst forth from their sylvan retreat in the early spring, they were promised by the aged trees around them a long and most happy existence.

Nothing could be more delightful than the long summer days and nights which they spent in each other's society. There was no envy, no jealousy, no pride—those dreadful plagues of the fair flowers of the human race—and they were luckily ignorant of any degrading and wasting dissipation to sap their young strength, steal the fine hues from their fresh and tender leaves, or to bend them out of that exquisite ease and graceful simplicity which they inherited from nature. The loveliest belle, while she envied their wonderful beauty, might have more justly envied their quiet repose and cheerfulness. The breeze came to them with an equal love, and stirred them gently; the dew fell silently from heaven, and freshened their opening bloom; the sun kissed them and ripened every charming feature, and the golden bee hummed around them in the mellow afternoons; and when the wind and storm arose they remained sheltered by the strong arms of a giant vine, which they had long cheered with their radiant glances, and which, in return guarded them to the full extent of his power.

There is a glory about flowers which always touches me. They are types of girlish innocence. Every one who looks at them feels that, if they have any consciousness, they must be happy. They bear upon them such an unequivocal impression of supernatural care and love. They are so clearly nature's pride—her favorites; the freshest, the sweetest, the most perfect of her creations.

Who that knows the world—its dark and awful tempests—its gloomy calms—its fierceness—its hatreds—its anguish—its disease—who would not be a flower, ignorant of these things, to open and breathe a grateful joy, and pass silently away under the glory of a summer's sky?

One day there came a lord, and he paused as he gazed on them. He admired all, but most he admired a tall and superb rose that spread out its half-uncurling leaves with the simple delight of health and youth.

"I will have that flower," he said, "for myself. It shall be forthwith transplanted. It shall be the delight of the great and the lovely. It will excel every other." And so he went away for his gardener.

The tall rose had listened with new feelings—strange thoughts of tremulous pleasure thronged upon her. She nodded her beautiful head and rejoiced.

"Dear rose," said a little blue violet that peeped out beneath, "you had better be where you are, in my mind. I never knew any good to come from transplanting such tender creatures as you from their natural homes."

"Saucy and dull violet," replied the queen of all flowers, "thou mayst remain, but I am inspired with a new existence. I wonder I never knew what it was to be admired or how much I excelled all of you. It is a delicious sensation—I am now the happiest of flowers."

She was interrupted by the gardener, who dug away the earth around her, and carried her to the palace of her master.

For a few hours she was intoxicated with delight. Everybody praised her. She wondered that she had been so long ignorant of her merits, and how gratifying it is to be praised; but in a little time she was neglected—her color faded—her fresh leaves grew dry and withered—she hung her head—all her charms disappeared. The lord took her and cast her into the road, and as she was leaving her brief residence, she met the gardener with another rose, all dripping with dew and blushing with pleasure.

"Alas," she said as she was dying, "alas, for my sweet and simple home. May all lovely flowers take warning by me, and shrink from the hand that would drag them from their happy seclusion to exhibit their beauties in the glare of public notice, and leave them, like me, afterward to perish unpitied."

Exchange.

GIGANTIC CYPRESSES.

LET me do homage to the great cypresses in what is still called the Garden of Montezuma. We walked to them through a tangled wilderness of yellow flowers.

They are the most glorious trees I ever beheld. The largest of them all was said, by Humboldt, to be forty-eight feet in circumference, but I am told that it is in reality forty-five feet. It certainly looks even more than this. The vast trunk appeared like a noble tower shooting toward the sky, and was lost in its own far-spreading and mighty cloud of deep green foliage, where half an army might have hid, *a la* "King Charles in his oak." Soft streamers of thick gray moss descend from every bough, which gives these trees a doubly venerable appearance.

The cypress which is second in size to the huge one I have mentioned, is little inferior in any respect; and, indeed, by some it is thought more beautiful and graceful. There are several others of dimensions almost similar. Think what they could tell, had they tongues, (and brains and memories into the bargain, by the way.) Venerable were they when Montezuma was a prattling infant and a mischievous hobble-de-hoy. And they looked on in unaltered, unshaken majesty, while the gallant Scott thundered, with his conquering artillery, against the strongholds of the descendants of Montezuma's Spanish conquerors; while the echoes of the world overspreading Anglo-Saxon tongue thrilled through the branches of these thousand-year-old monarchs of the forest, and may have rejoiced the shades of the avenged Aztecs.

The opening onset of the gallant and ever victorious Americans, when they stormed Chapultepec, was made under cover of these mammoth trees. Perchance these stately survivors of empires, creeds, triumphs, wars, and a hundred changes, may still stand in their solemn pride, and lordly majesty, when a hundred other changes may have transformed all around but themselves and their mighty comrades, the mountains.

The true name of these cypresses is Ahuahueti (*Sabino ahuahueti* or *Cupressus orsticha*.) The chief of these is called Montezuma's cypress. At the village of

Atlixco, there is said to be a cypress, (they are not like what we in England call by that name,) seventy-six feet in circumference, and which is supposed to be one of the oldest of vegetable monuments on the face of the globe, if not, indeed, the most ancient.

But this is not all. At a village called St. Maria del Tule, ten miles east of the capital there is an immense trunk of the same species of cypress, measuring one hundred and eighteen feet in circumference, though, by all accounts, it would appear to be three stems, closely, almost imperceptibly, joined together. It must be like the great "Boabab" of Asia; but the suspicion of this latter one being a treble tree renders it less interesting. I confess in one of the mighty Ahuahuetis that I saw, I detected something that looked as if a similar process had taken place. There is certainly a suspicious line along the trunk, but I am assured I am wrong by those most likely to know.

After admiring this giant grove for some time, we crept, feeling very microscopical and mite-like, back to the carriage, which, by comparison with these colossal suzerains of the vegetable world, had assumed considerably the appearance of a nutshell, drawn by the "industrious fleas" formerly in vogue in London.

One more look at that glorious grove, at those hoary and wondrous trees, and above all, at the stupendous giant of them all, standing there in its mighty greatness, so solemn, so placid, so darkly and silently sublime, with its own vast shadow making an eclipse, and an evening twilight, and shedding a gathered gloom and a dense darkness around—in itself a wood—and then back to lovely Mexico.

Important Discovery.

At a recent meeting of the Horticultural Society, London, various dried vegetables, peas, beans, Brussels sprouts, carrots, turnips, etc., were exhibited from Peyrusset, Moller & Co., of Paris. They were dried by a process peculiar to M. Gannal, the celebrated embalmer of animal substances. This

process is understood briefly to consist in dividing the larger vegetables into pieces, and placing them in an apparatus into which dried air is driven, until they have parted with all their water, and have become perfectly dry. In this condition they may be preserved for any length of time, and it is said that their flavor is not interfered with, inasmuch as nothing is taken from them except the water they contained, and that after being cooked they are just as good as when freshly gathered. If these facts therefore are borne out by experience, the discovery is a very important one, even as regards vegetables, more especially as regards ship owners, for they can be furnished in this state in quantity and at a very cheap rate; but, in addition to vegetables, fruits, as apples, pears, apricots etc., and even flowers, may be dried and preserved by the same process, and owing to the rapidity with which the drying is conducted, the latter retain their natural color almost as brightly as when first obtained from the garden. In confirmation of this several dried specimens were exhibited. It is to be hoped that additional information will be furnished on the subject.

Exchange.

DURABILITY OF TIMBER.—The piles under London Bridge have been driven 500 years, and on examining them in 1845, they were found to be little decayed. They were principally elm. Old Savoy Place, in the city of London, was built 650 years ago, and the wooden piles, consisting of oak, elm, beech and chestnut, were found upon recent examination to be perfectly sound. Of the durability of timber in a wet state, the piles of the bridge built by the Emperor Trajan over the Danube, affords a striking example. One of these piles was taken up and found to be petrified to the depth of $\frac{1}{4}$ of an inch; but the rest of the wood was not different from its former state, though it had been driven 1600 years.—*Ib.*

AN OLD TREE.—The Gentleman's Magazine, for 1762, contains an account of the age of a chestnut tree, then growing at Tamworth, in Staffordshire. This tree, it is said, was, at that period, probably the oldest, and certainly one of the largest, in England, being fifty-two feet in circumference. Its period of raising from the nut, may be fixed at

the year 800, in the reign of King Egbert. From that date to the reign of King Stephen, is 335 years, at which time it was fixed on as a boundary or landmark, and called by way of distinction, "The Great Chestnut Tree of Tamworth." From the first year of Stephen (anno 1135) to 1762, is 627 years, so its entire age at that period was 962 years. It bore nuts in 1759, from which young trees were raised.—*Ib.*

POTATO ROT.—The committee on Agriculture in the Massachusetts legislature lately reported a resolution offering two thousand dollars for a remedy for the potato rot, the remedy to prove successful for five successive years.—*Ib.*

Order and System.

ONE of the best farmers in the state of New York has the following rules and regulations agreed to and signed by every man he hires; they are heartily commended.

It is expected that persons employed on the farm of ———, will carefully attend to the following principles:

Regularity in hours.

Punctuality in cleaning and putting away implements.

Humanity to animals.

Neatness and cleanliness in personal appearance.

Decency in deportment and conversation.

Implicit obedience to the proprietor and foreman.

Ambition to learn and excel in everything.

No liquor or strong drink of any kind to be allowed.

MAXIMS OF ORDER AND NEATNESS.

1. Perform every operation in the proper season.

2. Perform every operation in the best manner.

3. Complete every part of an operation as you proceed.

4. Finish one job before you begin another.

5. Secure your work and tools in an orderly manner.

6. Clean every tool when you leave off work.

7. Return every tool and implement to its place at night.—*Ib.*

CULTURE OF THE TEA PLANT.

WHEN I was last in London, samples of the tea grown in Assam, by the Assam Tea Co.—also samples of the tea grown and manufactured by the East India Co., London, upon the Himalaya mountains, north-west provinces of India, of both black and green tea,—were sent to me for examination by some of the officers of the Assam Tea Co. I used the samples in my own apartments, and find the following memoranda made at the time. The sample of black tea from Assam is strong and rather astringent, of a peculiar flavor, though rather agreeable, and has a clean fresh relish in the mouth. The following day I tried the sample of green tea from the Himalaya mountains. It is of a light pea green color, large leaf, rolled to the size of a small pea, four times the size of ordinary China green tea, with a rude uneven surface. I know not by what name it is christened. It has neither a rich flavor or fragrance, but is a strong, useful tea, and agreeable to the taste. From the size of the leaf, which I examined both before and after the infusion in boiling water, I should judge it to be a second or third quality of green tea, and far superior to leaves of young and early growth. There was nothing in the tea repugnant to good taste, and nothing to invite it.

The third day I tried the sample of black tea from the north-west provinces. A full bodied, strong tea, and better to my taste than the Congoes from China. None of these samples bear any comparison with the best quality of China teas. It remains, therefore, with the United States to compete with China in the growth and manufacture of the finest qualities. No other nation can do it, I believe, because we have sufficient evidence of the fact that the soil and climate of Assam are adapted to the *growth* of the tea plant, but do not, and never will, produce the finest quality. The tea grown in the north-west provinces of India, upon the mountains, 6000 feet above the level of the sea, is of a fair, useful quality, but by no means equal to the finest Chinese.

It is well known that the tea plant will not flourish upon any part of the plains of India. Therefore an artificial climate is obtained by elevation. In tropical climates,

296 feet of vertical elevation are equal to one degree of latitude in temperature; and consequently six thousand feet of elevation would be equal to 13 degrees of latitude.

Mussoorie, on the Himalaya mountains, is about 31 degrees north latitude, so that 13 degrees by elevation, would give a corresponding temperature with 44 degrees north latitude. The tea plantations are often covered with snow in the winter time. It is a philosophic speculation of my own, that the pestiferous atmosphere of the plains of India combine, in some degree, with the atmospheric air of the mountains, and produce an effect upon the tea plant adverse to its perfection, and repugnant to the production of the finest quality. We are not so cramped in this country for frosts and snows and strong winds, that we can not find ample space this side of the clouds of heaven, for tea plantations to meet exactly the wants of the plant. We can run to the north, or to the south, to the east or the west, and set our foot upon the exact parallel adapted to our wishes, and leave the lofty mountains undisturbed.

Although my beginnings were and are small and feeble, and not sustained by affluence or pecuniary aid, so essential to a great national undertaking, yet I am thankful for the continued enjoyment of health and strength, and for a certain progressive advancement, which leaves no ground for apprehending any adverse result in the cultivation. The seedlings which have germinated this summer, and are now from eight to ten inches high, are far more numerous than I have had them at any former period. The excessive drought and heat have, no doubt, been prejudicial to the vegetation of the tea nut, as well as to the growth and vigor of the plants. The absolute necessity of more thorough irrigation is quite apparent. My older and larger plants now stand heat and cold, and have grown finely since they were transplanted from the village in March.—Most of them are covered with blossom buds. The first blossoms appeared yesterday. Numbers of others are just ready to open. The autumnal planting of tea nuts have germinated more generally than those planted in the spring and summer; they

appear in May, and continue coming during the summer, in smaller numbers. The nuts which I have just received from China, of this year's growth, are in sound condition, a small quantity of which will be spared, for those desirous of planting, and will be the best that can be obtained. I am aware that farmers, as well as others, are apt to

be impatient, and grudge the long time they must wait for the latter harvest. Many of them, doubtless, with me, can remember when there was not a bale of cotton grown in the United States, nor a steamship floating upon the ocean.

JUNIUS SMITH, LL.D.
[*Jour. of Com.*]

Greenville, S. C.

The Garden.

GEMS FROM THE ROSE CATALOGUES,

WITH A FEW CULTURAL HINTS.

We may search through the catalogue of flowers, and not find one possessing higher claims, nor yet such high claims to our notice, as the lovely tribe before us; well and justly may it be styled "Queen of Flowers." Other genera of plants there are, eminently beautiful—the camellia, for instance; but, alas, it lacks that charming fragrance. Again, the delightful fragrance of the mignonette and heliotrope is unaccompanied with anything beautiful or striking in their bloom; many orchids possess flowers the very acme of beauty, whether we regard the contour of the bloom, its exquisite tintings, or enchanting fragrance; but in most cases they are produced by plants anything but beautiful, and require to be grown in an atmosphere so hot and damp, that their beauty can only be enjoyed a short time.

Turning to our favorite, the "Queen of Flowers," has it one drawback? I think not. Many are perfectly hardy, and most of them nearly so in the middle states, requiring only a slight protection in the coldest weather. The habit of all is beautiful,—the dwarf variety growing near the surface of the ground, the standard with its graceful pendant head, the pillar rose covered with bloom from the surface of the ground to some seven or eight feet high, or the

graceful climber swung over the arbor or cottage wall, and hanging down with rich festoons of bloom, charging the air with their delicious fragrance. Let us examine our roses as they are advancing for bloom,—how lovely in the bud! was diamond ever set half so beautifully as the bud of the red Moss Rose! But even here, nature, as if trying to exceed herself, has given a more lovely freak in the white Clifton Moss,—a sport from the red. This peerless gem, when in bud, is perfection—I know nothing among flowers to excel it—a pure paper white, bursting through a deep green mossy calyx! How lovely is Tea Safrano in bud!

But we must pass on to another quality—the flowers—which we have of every size, from the tiny blossoms of the Fairy Rose to the immense blooms of the La Reine, Souvenir de la Malmaison, Devoniensis, etc. The contour of the bloom presents as much variety as size, but in every phase it is beautiful.

Come we now to color. Here we are not deficient; we have all and nearly every shade save blue and black, and to this latter color many of the changeable Chinas, under a brilliant sun, make a close approach.—Nearly all possess fragrance in an eminent degree, and that of the most enchanting kind.

Now for whom are their culture most adapted? the man with a small garden, or with an extensive one? They are suited for all, whether the citizen's confined garden, where many pretty dwarfs may be grown, with climbers running over the arbors and trellises—every garden in the country should grow them, large or small, and that pretty extensively, in a variety of ways, as they require very little care. They are extremely tractable, and will even please us by growing equally well in pots, in the streets, in cottage windows, or the snug quarters of a green-house or conservatory.

Are they favorites? This question may be best answered by pointing to the past and present, to show to what an extent they have been and are cultivated. The ancient Greeks and Romans cultivated them extensively; in more modern times we find all civilized nations growing them to great extent; in many parts of Asia they are grown largely; the Chinese, in a special manner, may be mentioned as being extensive growers of this flower, and that with the greatest assiduity and care. Nearly all the nations of Europe cultivate them more or less, but France and England do so to an immense extent. I have seen in some of the large nurseries in the latter country, fourteen, sixteen, and twenty acres of roses together, and the greater portion of them in bloom at the same time; they were of various heights, from dwarfs to tall standards and weepers. Many of the "great growers" plant-out annually from one hundred and fifty to two hundred thousand stocks for budding; this will give some idea of the rose trade in that country.

In our own country—the United States—this flower is now cultivated very extensively, and in a few years it will, I feel quite confident, exceed all others. In our rich soil and fine climate it can be grown not

only as well, but I unhesitatingly say better, than in any part of Europe. Those persons who have imported roses from France know to their cost what miserable "stuff" they are. The plants of English growth are much finer; but after managing for years one of the most extensive collections in that country, I must say they grow and bloom infinitely finer in this. In fact, the vigor, the luxuriance, and thriftiness of growth, as well as size and beauty of the blooms, more particularly of the hybrid perpetuals, Bourbons, Chinas, and Teas, are such as to make an ordinary observer consider them distinct and superior varieties to the same grown in Europe.

After these few preliminary remarks, let us take the Rose Catalogue of one of our "great growers;" on opening which we shall find some old, yet very distinct classes of summer roses, though the ever-blooming classes are unquestionably "the flowers of the day." Still these old favorites possess so many intrinsic good qualities, that we can not well dispense with them; and, according to custom, I shall give them the first place.

THE PROVENCE ROSE. (*Rosa Centifolia*.)

First in the catalogue of roses is found this class; and very properly has it been assigned this place, whether we consider its fine globular blooms, and delicious odor, or the antiquity of the type of this class—it is generally believed to have been known to the Romans, and was the hundred-leaved rose of Pliny. No other class perhaps is more extensively disseminated or cultivated in Europe at the present day, or for many years past, than some kinds of this group, more particularly the variety named the "Cabbage Rose;" it is found, I may venture to say, in every garden in England where a rose is grown; it is also very ex-

tensively cultivated in France and other countries abroad.

The whole of this class of roses are extremely fragrant, and have fine large, globular, full flowers. They are also one of the hardiest classes that we possess, requiring no protection in the middle states. This class is not so extensive as many others; but it is not my intention, in any of the classes which will come under our notice, to give more than a few of the best varieties, or what I consider from long experience to be such. The following are six of the best in this class:

1. *Cabbage, or Common*.—Flowers pinkish blush, very large, globular and full; habit branching; growth very thrifty. The gem of its class, and should be found in every garden, however limited.

2. *Cristata, or Crested Moss*.—Flowers deep rose, largest size and very double, form globular; flower buds singularly and beautifully crested; quite unique in its way; habit branching and thrifty.

3. *Reine de Provence*.—Flowers glossy rosy blush, large, finely shaped and globular, double; habit branching and vigorous. A beautiful and distinct rose.

4. *Sylvain*.—Flowers a rosy carmine, large and very double, finely shaped, form cupped; growth moderate, with branching habit.

5. *Superb Striped Unique*.—Flowers white, striped with lake or bright red, very beautiful when in this state, but more generally coming a pure white or plain red, large and double, form cupped; growth moderate.—Of all striped roses this is the most beautiful, but very inconstant. In this country it comes more true to color than in the humid atmosphere of Britain. Plant in a sandy loam, not over rich, and avoid strong or stimulating manures, and success is pretty certain. This is a sport from the old Unique Rose.

6. *Unique, or White Provence*.—Flowers paper white, size moderate, very double, and beautifully cupped; habit moderate.—A very beautiful old white rose, supposed to have originated from sporting a branch of the “Cabbage, or Common Provence.”

A light sandy loam suits this class of roses best; in it they grow luxuriantly and flower finely: on the contrary, in a heavy clayey soil they will not succeed on their own roots. Worked upon the *Manettii* stock, they appear indifferent as to soil, growing freely in all, whether light or heavy. Nos. 1, 2, and 3, grown half a standard or standard high, form fine graceful heads from the pendant habit of their fine globular flowers; as dwarfs, whether in masses, by themselves, mixed with other varieties, or as single plants, they are very beautiful. The beds or borders in which they are to be grown should be trenched at least eighteen inches deep, in the fall, well enriched with rotten manure, and drained should the nature of the ground require it; for though they like to be kept moderately moist and cool in summer while growing, yet stagnant water in the soil about the roots would be particularly injurious. Early in spring is the best time for planting, and by that time the ground will be in good condition, after having passed in a rough state through a good winter's freezing. About eighteen inches apart is a fair distance for dwarfs. Standards must be regulated in a great measure according to the taste of the planter. Should the weather prove dry after planting, an occasional watering of liquid manure will very much assist them, say once a fortnight; (if practiced annually from the commencement of growth until the bloom is over, its value will be apparent.) The ground about the roots should also be covered with half-decayed litter, which will very much assist them by keeping the ground cool and moist in our dry and warm sum-

mers. All this attention will be well rewarded in June with a profuse bloom. Annually, in the fall, the ground should be heavily dunged and dug between them. Early in spring they will all require pruning: this must be done pretty severely, shortening back the shoots to three or four eyes each; they will then break out vigorously and bloom finely.

THE HYBRID PROVENÇE ROSE.

(*Rosa Centifolia Hybrida.*)

The rose grower, if he wishes to cultivate clear, soft, light and delicate colors, must come to this class to select. Nothing can surpass the delicate purity of many in this group; they are truly lovely flowers, and, for the most part, of excellent shape. The coloring of the most skillful artist will scarcely make an approach to the delicacy of the tints of many in this class of beauties. "Having long flexible shoots, grown as standards they are eminently graceful, having their spreading pendant branches loaded with blooms of the purest and clearest colors." "All the strong growers form pillars of the softest colors, mixing well with the high colors of the strong French, hybrid China, hybrid Bourbon," etc. The weak growers are best adapted for dwarfs, though the whole of the class may be grown in this way under judicious and systematic pruning.

These roses are all very hardy in the middle states; but surely in very severe weather no lover of roses will grudge a little litter being put about them. The following eight varieties can not be surpassed:

1. *Blanchefleur*.—Flowers white shaded with the most delicate flesh color, large and double, form cupped; habit erect; growth thrifty. An early and profuse blower, and a beautiful and perfect rose. It is now a comparatively old flower, yet it is one of the best in its class.

2. *Compte Plater*.—Flowers a delicate

cream, center tinged with fawn, large and double, form cupped; habit branching; growth thrifty. A truly beautiful and unique rose.

3. *Devigne*.—Flowers delicate salmon, large size, double, form cupped; habit branching; growth vigorous and thrifty. A distinct and pretty rose.

4. *Emerance*.—Flowers cream approaching to straw-color, medium size, very full, form cupped and finely shaped. This is quite unique among summer roses, the color being distinct from any other. A beautiful and exquisite rose.

5. *Pauline Garcia*.—Flowers creamy white approaching to straw-color, large and very double, form cupped, symmetrical and beautiful in shape; habit erect; growth moderate. A lovely flower.

6. *Princess Clementine*.—Flowers snowy white, large and very double, form cupped, and finely shaped; habit erect; growth vigorous and thrifty. A superb flower, and may be considered one of the best and purest white roses.

7. *Duchesse d'Angouleme*.—Flowers pinkish blush, extremely delicate and beautiful, wax-like, size medium, full, form cupped; habit very erect; growth moderate. An old favorite, but possessed of such good sterling qualities as to make it always admired.

8. *Eugenie Dessauzais*.—Flowers delicate pink with blush margin, large and very double, form cupped, shape perfect; habit branching; very vigorous, thrifty growth. When bloomed in perfection this is one of the most beautiful and delicate roses, but it is rather uncertain.

These roses are not particular as to soil, being for the most part very hardy and free growers; if the ground is trenched, manured and prepared as recommended for the previous class—Provence—and the after treatment be given as recommended for those, success is certain. They grow well

on their own roots, or worked upon a good free stock, as the *Manettii*. If grown as standards, this latter stock should be used for the purpose; it grows and swells finely. Not so with the Dog Rose; when used as a stock under our bright sun, it becomes bark-bound, dry, hard, and contracted—inside which the sap flows with difficulty, and as a consequence the plant grows feebly, and sinks into premature decay. With the *Manettii* stock this will not take place; they will grow vigorously and thriftily. The pruning-knife must be used with caution among this class; they will not bear such close and hard pruning as the “Provinces.” If the plants are very strong, (whether grown as standards or dwarfs,) thin-out the very luxuriant shoots as well as the weakest; shorten back the moderate shoots to nine, twelve, or fifteen inches, according to the strength of the plant, giving a proper balance to the head, as well as a graceful contour to the whole. As a general rule, the weak growers should be pruned the closest; the stronger varieties the least. Of their culture as pillar roses, I shall speak in detail in another article, when classes suited to that particular culture shall be specially noticed.

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THE MOSS ROSE.
(*Rosa Centifolia Muscosa*.)

Perhaps in the whole catalogue of roses there is not a class more distinct or attractive than this; their beautiful mossy calices make them different from all others. The Red Moss is said to be a sport from the common Provence; and florists are generally pretty well agreed upon this point.—Many of the most beautiful in the group have originated in this way. The Clifton White Moss is a sport from a sucker of the Red Moss. The Mossy de Meaux is a sport from the old de Meaux Rose. Unique White Moss is a sport from the old Unique Rose, in the same way as noticed of many

other varieties which have originated in a similar manner.

Before proceeding further, I must describe, for the tyro in horticulture, what a sport is. Most trees and plants are inclined occasionally to produce branches and flowers which will be found to differ from the general branches or flowers of the same trees and plants; these branches, if perpetuated, whether by cuttings or budding, will generally retain this accidental character; in some plants it is quite “fixed,” as the French term it, while in others it is variable, and will occasionally revert back to the original type.

Of late years this class of roses has been much improved by hybridizing, and perhaps in no other class is the benefit more apparent. A few years back the number of good varieties was extremely limited; it is not so now, for we have flowers of the purest white, and those with nearly every intermediate shade to a deep rich crimson, and purple. The few varieties we then possessed bloomed only once in the season, and were of dwarf growth. There is now among them two very distinct groups, one perpetual, giving blooms in the autumn—the other with long flexible shoots suitable for pillars; the former have originated by crossing the Moss with the perpetuals, and the latter by crossing the Moss with the strong growing French and hybrid Chinas. In this class there is yet much room for improvement and novelty by the persevering florist.

This class varies much as to the degree of cold they will bear. Some are very hardy, and will withstand any cold without protection in the middle states, while many others are rather delicate, and require to be well protected in winter. This is dependent upon the parentage from which many draw their origin—the hardy Mosses having been crossed with some varieties comparatively more delicate. The greater number are

delightfully fragrant, are full flowers, and beautifully shaped. The dozen following varieties are among the best in this class:

1. *Blush*.—Flowers blush, with pinkish center, well mossed, large and double, form cupped; habit branching, with moderate growth. A very distinct and beautiful rose.

2. *Celina*.—Flowers brilliant crimson, shaded with purple, color very brilliant when newly expanded, form cupped; growth vigorous. A very splendid flower, and decidedly the best dark Moss Rose.

3. *Common, or Old*.—Flowers delicate rose, very large and double, well mossed; growth vigorous; form globular; very fragrant. This fine old rose is well known, and may be considered one of the most beautiful.

4. *Ætna*.—Flowers brilliant carmine tinged with purple, large and double, form cupped; growth vigorous and thrifty. A beautiful rose.

5. *Laneii*.—Flowers deep rosy crimson shaded with purple, large and very double, form globular; growth very vigorous and thrifty. A beautiful and distinct flower.

6. *Luxembourg*.—Flowers deep crimson tinged with purple, large and double, form cupped; growth luxuriant and thrifty. A fine rose and distinct.

7. *Pompon, or De Meaux*.—Flowers delicate pinkish blush, small and very double, form cupped; habit quite dwarf. An early blooming variety, exceedingly pretty, but in many situations rather delicate.

8. *Princess Adelaide*.—Flowers light brilliant rose, flowering in free clusters, large and double, form cupped; habit erect; growth very vigorous and thrifty. A beautiful rose, evidently a cross between a Moss and some strong growing hybrid China or hybrid Bourbon.

9. *Princess Royale (Portemer)*.—Flowers delicate salmon, large and double, form cupped; habit erect; growth moderate, well mossed. A very distinct and beautiful rose.

10. *Prolific, or Gracilis*.—Flowers pinkish rose, large and double, form globular; growth moderate. A profuse blooming variety, and forms a beautiful group or mass.

11. *Unique de Provence*.—Flowers pure white, blooming in clusters, large and full; form globular; habit erect; growth moderate. A sport from the old Unique Rose. Beautiful and distinct.

12. *White Clifton, or Bath*.—Flowers paper white, with occasionally pink stripes in the petals, well mossed, exquisite in the bud and half bloom, large and double, form globular; habit erect; growth moderate, in many situations delicate. This is one of the most beautiful and lovely of roses, and unquestionably by far the best White Moss.

This class succeeds best in a light sandy loam, well enriched with good manure; in a soil of this description, dry and warm, in a pure airy situation, with the plants on their own roots or the *Manettii* stock, success is certain. I said, "a pure airy situation," for to grow these where the least impurity exists in the atmosphere is next to impossible. The confined atmosphere of towns and cities is most inimical to them. That little gem, "*Pompon, or De Meaux*," can not breathe through its delicate organs the least impurity, and pertinaciously refuses to grow where too much surrounded by the habitations of man. They all delight in the pure country air. Should the soil be inclined to be heavy, they are best worked upon the *Manettii* stock; though I must observe of this stock, it will answer equally well in a light sandy loam. All things considered, I prefer having them on this stock when they can be procured.

Nos. 2, 3, 4, 5, 6, and 9, form good heads as standards. These varieties being of strong vigorous growth, will not require such hard pruning as the dwarf and more moderate varieties. If cut back to within six or nine inches of the previous year's growth—always bearing in mind the more delicate the

growth the more closely they are to be pruned—they grow freely and bloom profusely.

Nos. 5, 6, and 8, form beautiful pillars if trained in that manner; the two former will grow about six feet high, and the latter about ten feet; they are then the most exquisitely beautiful and unique objects in a flower-garden. The whole may be grown well as dwarfs, with the exception of No. 8, which is only fit for a pillar. In pruning, the moderate and delicate growers should be cut back to five or six eyes or buds; the stronger growers to six, eight, or ten inches, increasing with their strength. When the wood is thick and over-crowded, thin-out the weak and very luxuriant shoots well, leaving the moderate size well ripened ones, which answer best.

The directions given for the preparation of the ground and planting for the Provence roses, will equally apply to these, as well as the after-culture in watering with liquid manure, mulching, and the general outline.

THE FRENCH ROSES.

(*Rosa Gallica*.)

This very old and extensive class of roses is very generally cultivated in Europe. To what does it owe its popularity? I think it may be said, to a combination of good qualities, as well as its general diffusion. It is supposed, on good authority, to have been known to the Romans. Some varieties are grown extensively in England, for the London druggists, and in Provence, in France, to make their celebrated conserve of roses—yet these are not the causes which make its culture general in those countries, but rather its sterling good qualities. It is very hardy, and will grow in almost any soil and under any treatment, though it wonderfully improves under good culture; the flowers are of every hue and shade of color; glowing and brilliant, very double, perfection in shape,

and in the disposition and regularity of their petals, admirable; if we add to this their extreme fragrance, we need not be surprised at the extent to which they are cultivated. Of late years the hybrid perpetuals or ever-blooming roses, have come very much into cultivation, and deservedly so; yet not so much as to displace or drive out of cultivation this beautiful old class—it has yet many admirers, and I know some enthusiastic amateurs who prefer growing this group, for the fine full flowers and rich colors, to any other. Indeed, we can not well dispense with them as yet. Withdraw them from the rose garden in the month of June, and what a blank is left!—their dazzling brilliancy, fine shape, and full flowers, cannot be replaced. Among this class are many beautiful mottled and striped flowers, which are truly pretty. The number of beautiful varieties in this class is prodigious, so that it becomes a matter of some difficulty to select the best and most desirable. This profusion of varieties is no doubt caused by the freedom with which the varieties in this class seed, affording abundant opportunity of raising new and select varieties.

Grown as dwarfs, they form fine compact bushes,—they also form beautiful low standards, in which way they display their fine flowers to great advantage.

Take the following twelve varieties, which may be considered among the best:

1. *Boul de Nanteuil*.—Flowers crimson purple, immensely large, and double, form compact; habit branching; growth vigorous and thrifty. A magnificent rose, which should find a place in the most limited collection.

2. *Cerise Superbe*.—Flowers brilliant crimson, approaching to scarlet, medium size, double, form cupped; habit branching, with moderate growth. A free blooming, showy rose.

3. *D'Aguesseau*.—Flowers dazzling crim-

som, shaded with purple, large and full, form compact, perfect; habit erect; growth medium. A very beautiful rose.

4. *Eblouissante de Laqueue*.—Flowers velvety crimson, large and very double, form expanded; habit erect; growth delicate. A beautiful flower, though variable as regards its brilliancy and fullness.

5. *Kean*.—Flowers rich, velvety scarlet, large and double, form compact, perfect; habit branching; growth vigorous and thrifty. A splendid flower, and should be in every collection.

6. *Latour d'Auvergne*.—Flowers rich crimson, center glowing, large and full, form cupped, perfect; habit erect; growth vigorous. A splendid rose.

7. *Ohl*.—Flowers violet crimson, with brilliant red center, large and double; habit branching; growth vigorous and thrifty.

8. *Œillet Parfait*.—Flowers white, distinctly striped with rose and crimson, of medium size, double, form cupped; habit erect; growth small. This is one of the most beautiful of striped roses, having much the appearance of a Bizarre carnation.

9. *Oracle du Siecle*.—Flowers deep crimson, large and very double, form cupped; growth vigorous. A beautiful rose.

10. *Perles des Panachees*.—Flowers pure white, striped with red and purple, the marking clear and well defined, medium size, full, form cupped; habit erect; growth moderate. A beautiful striped flower.

11. *Shakspeare*.—Flowers rich rosy crimson, with a glowing red center, large and double, form compact, perfect; growth vigorous. A very noble rose.

12. *Triomphe de Jausens*.—Flowers bright crimson, tinged with purple, large and double, form cupped, perfect; habit branching; growth vigorous. A splendid rose.

The adaptability of this class of roses to almost any soil or situation, I have already

noticed, as well as its improvement under good cultivation. To grow them well, they should have a good firm loam, of a more adhesive nature than that recommended for Provence and Moss roses; this should be well enriched with good rotten manure; the preparation of ground planting and subsequent treatment to be the same as recommended for the Provence. The ground, as a matter of course, should be well drained, that no water may accumulate about their roots. In planting groups of dwarfs, they require more space than the Provence or Moss, say twenty-four inches apart, as they form much larger heads. I have already noticed their fitness for dwarfs or low standards, forming, as they do, large compact heads.

In pruning, thin-out well the heads, as they produce a large quantity of shoots, which, if suffered to remain, would soon injure the heads, as well as the blooms, which would be much smaller. Having thinned the heads, shorten back the remaining shoots to from five to seven or nine inches, according to the strength and maturity of the shoots, bearing in mind the weakest are to be pruned the closest, the strong growers least. The maturity of the shoots must also be kept in view by the pruner, cutting back to well ripened prominent buds, giving at the same time a pleasing contour to the heads of the plants. On their own roots, or the Manettii stock, they appear to grow alike freely under the treatment I have been endeavoring to describe.

J. SAUL.

Pruning Evergreens.

When people have leisure in the winter, they know that it is not the right time to put their evergreens into good shapes, or keep them to their proper bounds; and in the summer, when the work should be attended to, they know just as well that they have no time to attend to such things. Young evergreens get up, in a few years, with all sorts of defects; and fifteen or

twenty years hence, a practiced eye can see what is going on among them now, as well, if not better, than if the same eyes were present this very July. Leaders and side-branches grow as they list. Fastigate or upright growing sorts get round headed forms—round headed ones grow to one side, the leading limbs to this or that side of a tree, and all, and much more besides, for the want of the pruning-knife, or of the finger-and-thumb way of stopping, applied regularly at the proper season. It is not too much to say, that in a first-rate garden the pruner is, or should be, as busy at his section in July as at any other period of the whole year; and as a criterion as to how far he has advanced in his art, we shall lay it down thus:—A stranger looking at an evergreen bush or tree, of any size or age, directly after it has been pruned, should not be able to perceive, at a cursory glance, that the knife had touched it for the last twelve months. If one can see, at a glance, that an evergreen has been recently cut-in, depend upon it, the pruner wants a notch or two. The worst of the matter is, however, that it is very difficult to convey, by verbal or written descriptions, a just notion of how this high style of art is effected.

I am never measured for an article of dress, without regretting that one man can not explain the finger work of his art to another with the same precision as the best "fitter," but, as that can not be done, we must be content with general maxims or rules; and one of the first fundamental rules in pruning evergreens is, *the lowest branches should be the longest, whatever the shape of the head may be*. There is not a single exception to this rule that I know of. No sooner is a higher branch allowed to grow out further from the main stem of a tree, or from the general mass of branches on a bush, than the lower branches, than a direct error is committed; and if not remedied by cutting-in this longer branch, a sure foundation is laid for the destruction of the lower parts of the tree, which will, in the long run, cause it to get naked below, because the longer branches will shade the others, and throw off the rain from them. You may see an example of this bad management along the road sides in every parish in England. Hedges, in general, are so unskillfully treated all over the country,

that there is no lack of "bare bottoms" anywhere, and this from allowing the hedge to be nearly as broad at the top as it is at the bottom. Let us, therefore, bear in mind, that every branch, yea, every leaf of an evergreen, should stand in the same relation to each other, as the slates and tiles on a roof, no matter what the outline of the head be.

The second rule is, *no leaf should be cut through in pruning an evergreen*. Clipping evergreen hedges does not come in under the rule of pruning.

The last rule applies to the mode of cutting. *No cut ends should be seen on the bush or tree*; and that is effected by beginning the cut on the opposite side to where you stand, and always cutting with an up stroke; then the cut part will either face downward or toward the centre of the plant; and if you cut close to a lateral branch, or to the bottom of a leaf stalk, as all good pruners do in the summer, and as the worst kind of pruners do in the winter, I should like to know how I, or anybody else, could find out, at a yard's distance, that your plant had been pruned at all. There is a very common and most mischievous pruning cut, which, as far as I am aware of, has never yet been mentioned in print, and I hope to put scores, yea, thousands, to the blush when I mention it, for of all the cuts in this cutting world, it is the one against which there ought to be an act of parliament to put it down. But I am wrong; it is not a cut at all, but a snap off, and is done on this wise: A knife is held firmly by the four fingers of the right hand with the edge facing the thumb, the thumb itself being free, but bent on mischief; a rose shoot, or the branch of some other plant is now grasped between the edge of the knife and the thumb, the shoot is then pressed against the edge of the knife by the thumb, and by a turn or twist of the hand the shoot is snapped asunder, on the edge of the knife, leaving a bruised or jagged cut, just as if a wild goat had gnawed it off. Now, a dozen of such bruised or gnawed cuts over the head of a fine rose bush, are as bad as anything can be, and will be sure to do it much injury, as the bruised ends will either die back or let in the wet, or be a harbor for insects or their eggs, besides the slovenliness of the thing.—*Cottage Gardener*.

THE CULTURE OF SEA-KALE.

(*Crambe Maritima.*)

WHY the culture of this delicious vegetable has been so much neglected in our country, I am unable to say ; but I do think that the attention of our vegetable gardeners should be directed to it, and for that purpose I have been induced to offer the following practical hints, hoping that it may be the means of drawing a supply into our markets, thereby affording a treat which none but those destitute of *taste* can refuse.

The best soil for the successful production of Sea Kale is a rich deep sandy loam, though ordinary garden soils, if mixed with a good proportion of sand and well manured, will answer the purpose. Stiff or wet soils should be avoided. Before sowing or planting, the ground should be thoroughly prepared, by trenching to the depth of from two to two and a half feet, and thoroughly mixing with good compost manure, thereby rendering top-dressing sufficient for after-culture, and saving the roots from disturbance.

Sea-Kale may be raised by seed, root-cuttings, or offsets ; but the seed is by far the most preferable. Sow in April or May, thinly in drills, three or four feet apart and two inches deep, ultimately thinning out to fifteen or twenty inches in the rows ; which, in order to insure against injury the first winter, should not be done until the plants are one year old. In the fall the ground must be thoroughly cleaned from weeds, and the surface, well stirred either with a two-pronged hoe, or still better, with a fork, to the depth of four or five inches ; after which a covering of fresh stable dung six inches in depth should be laid on, and left so until Spring, when the rows should be dressed just before the plants come through the ground, as follows,— viz : after raking off the rough part of the covering, point-in with

a fork the short part of it, taking particular care not to wound the roots ; at the same time scatter a little earth upon the crowns of the plants.

In inland places salt may be used to advantage as an invigorator. The third year after sowing, it will be fit for use ; and to prepare it for the table, blanching must be attended to as follows : — As soon as the leaves appear above the ground a few inches, they should be earthed up and large flower-pots inverted over them, taking care to exclude light by stopping the hole in the bottom of the pot, and then, to guard against sudden changes in the weather, cover the pots entirely with soil. When the sprouts have sprung up to the height of from eight to twelve inches, they are fit for use, and should be cut off with a knife without injuring the crown of the root ; after which they may be prepared for the table in the same manner as asparagus ; and I venture to say, that should consumption prevail and tastes be agreeable, very little will remain for future disposition. In case pots can not be had, other methods may be resorted to, such as earthing up, as the plants advance, once in four or five days, or by hooping over the beds or rows, and covering with mats ; but if possible, the pots are decidedly preferable, and well repay the trouble or expense of procuring them. In blanching without pots, sand is sometimes recommended for earthing up ; but as it is difficult to clean the sand thoroughly out of it, I would recommend, as preferable, the use of bog-peat, which renders the shoots more tender and delicious than anything else.

The foregoing remarks apply to ordinary culture, next comes *Forcing* ; for which purpose the plants should be two or three years old—(yearling plants may be forced, but

the shoots will of course be small.) In the fall, say October or November, the leaves must be trimmed off from the plants, all flower stalks should be cut clean away, the ground gently forked up about them, and an inch or two of very light earth laid over the crowns of the plants; then collect a sufficient quantity of fresh stable dung, which should be thrown in a heap and slightly fermented as for a hotbed. Blanching pots should then be prepared about fifteen inches high, and from twelve to fifteen inches in diameter. Many kinds are in use, but the most improved kind used in forcing are made in two parts, the lower part upright, and the upper part a flattish lid to fit, the advantage of which will hereafter be readily perceived. Large size garden pots will answer very well, in case the others can not be had. Three or four dozen pots or covers will force sufficient for a large family from Christmas till April, provided the plants are in good condition for forcing. Two or three weeks after fall dressing, place the covers over the plants, pressing them firmly into the ground; then fill the intervals of the rows with the dung, treading it gently, or beating it with the fork, and ridge the whole to a sufficient height over the covers to maintain the temperature from 50° to 70°, renewing the covering at intervals according to the severity of the weather. A covering of boards over the ridges, will be found advantageous in guarding against the snow and cold rains. Three weeks or a month from the time of covering, the shoots will be fit for use, and may be gathered by removing the manure from the top of the pots, and raising the lid without disturbing the lower part; which is the advantage of having the blanching-pots in two parts. Late in the spring, or as soon as the plants have done producing, remove the dung and covers, and let the ground about them be slightly dug over with the fork, the same as

in ordinary spring dressing. Forcing every second year is preferable to more frequent drafts.

Throughout Great Britain and Ireland, Sea-Kale is very extensively used; some think it not inferior to asparagus, others prefer it in soup to any other method of consuming it. The fact that it is even more nourishing and digestible than asparagus, is a great recommendation; and I know of no reason why we—a people in the midst of so many peculiar advantages in climate, soil, etc.—should be deprived of so delicious a treat. Then let us unitedly say to the gardeners, “Forward! onward! and lose no time in placing within our reach that long neglected prize.” And may their labors be amply rewarded.

W. P. SHEPPARD.

Weeds.

THIS is a subject of much interest, equally to the proprietor of a large estate, the occupier of a suburban villa, and the humble citizen or laborer who cultivates his plot of allotment ground.

Weeds are, to all, the bane of cultivation, adapting themselves to every variety of soil, situation and circumstances. Poor and barren soils produce their peculiar weeds; while rich and highly cultivated ground is favorable to the growth of a formidable host of these pests. Even the hardest rocks and walls produce them, and they seem to be fitting instruments for the fulfillment of the curse imposed on fallen man, that he should eat his bread by “the sweat of his brow.”

The pleasures of cultivating a garden, have been, in all ages, descanted upon by the “wisest of men.” They, too, have been sung by poets, but, alas, for poor human happiness! they are not unalloyed; weeds will spring up, and choke the finest flowers; our gayest, sweetest friends, are oft nurtured with a nettle in their hearts.

Weeds are the most constant, the most enduring of “forget-me-nots.” They follow us in the first bright days of spring, and the heats of summer; they attend us in the declining days of autumn, and are not wanting when winter spreads his icy mantle over the

face of nature; they grow in the tropical climates of our stoves, and flourish around our ice-houses. And from whence do they come?

In the course of my experience as a gardener, I have not unfrequently met with persons who have thought that weeds were produced by some mysterious agency. I heard it said, that certain land was subject to such and such weeds, and always would be. True enough! because the weeds were allowed to seed year after year.

When we remember that all weeds, in addition to their facilities for propagation, by division of the roots or creeping stems, are endowed with the power of reproduction by seeds, to an almost unlimited extent, the importance of getting rid of them in their infancy must be obvious; the labor of doing this may be considerable at the first, but it will be the forerunner of a sound, sensible and permanent economy, if persisted in for a few years.

It does not appear to me that true economy consists in letting the surface of the ground become covered with weeds and moss, and then using expensive applications to destroy them, but rather in steady and uniform perseverance in thinning the ranks of the enemy, giving no quarter. It is an old adage, that

"One year's seeding
Makes seven years' weeding."

Also, that

"One year's good weeding,
Will prevent seeding."

I can vouch for the truth of this old dictum from practical experience, having fully tested the force of it; and the recommendation of Dr. Lindley, in answer to a correspondent; "that there is nothing like hand labor," exemplified by a boy "at half a crown a week," is in my humble opinion most correct.

Many persons may object to this on the score of not having sufficient hands to do it. But be it remembered, that although a reduction of necessary labor may effect a temporary saving and negligence of the "bits of groundels," the day of retribution will certainly come, and the next generation may lament the effects of "one year's seeding."

It is proposed in this paper to treat firstly of the weeds which infest cultivated grounds, as kitchen and flower gardens; secondly,

those which disfigure lawns; and thirdly, those which daily "beset our paths."

Weeds which most infest cultivated Garden Grounds.—The most troublesome of this numerous tribe are the Groundsel, Chickweed, Shepherd's purse, Bestort, Nettle, Couch Grass, Coltsfoot, Bindweed, Dead Nettle, Dandelion, Sow Thistle and Dock, [to which may be added in this country Purslane White and Clover.]

The gardener by his deep system of culture, possesses an advantage over the farmer; for the annihilation of a crop of weeds of all the above, excepting that pest the Bindweed, may be got rid of by trenching to the depth of $2\frac{1}{2}$ feet. Although the farmer can loosen and aerate to a considerable depth by the sub-soil plow, he cannot bury the roots of perennial weeds at a sufficient depth to insure their destruction. His remedy, therefore, consists in the process of fallowing, giving repeated harrowings, and the tedious operation of hand-picking.

To cleanse a foul and "well seeded" garden, after having trenched down the surface, with its vegetation, let it be frequently cropped, digging and stirring the soil to various depths, to bring the latent seeds near enough to the surface to vegetate; and when they have done so, apply the hoe in their infancy from time to time. Let all crops be grown in drills, for the sake of facilitating the operation. If you can prevent it, do not allow weeds to go to seed in the hedges or fences, and never pass a "bit of groundsel" but with a feeling of zealous indignation. Such a system will in a few years rid you (comparatively) of weeds. I have pursued the course I recommend for some years, and my labor for destroying weeds is not a tenth part of what it was.—There never was a fouler garden than I found it, and I believe there are few now where weeds are scarcer. "Vincit omnia labor," is truly applicable to this result. While upon this subject it may be well to mention that for a light crop of weeds the newly invented hoe, or the blade of an old knife, makes one of the best tools for use. This is not mere theory, but was first noticed to me by Mr. Wyatt, of Manor Farm, Deptford, whose reputation as a market gardener needs no comment from me.

The danger of procrastination has not any

more apt illustration than the evil consequences which result from neglecting a crop of weeds because they are only small ones—mere “bits.” We should ever bear in mind how they deprive our crops of the fertilizing matters which we may at considerable expense have deposited in the soil, and at no period are they so exhausting as when the

flowers are developed, and the seeds forming. When in this state they choke, and destroy, and fail not to leave behind them unmistakable evidence that we have not yet learned to act upon the advice of our immortal poet who says:

“Be wise to day,
’Tis madness to defer.”

Gard. Chron.

THE CULTURE OF CAULIFLOWERS.

From the 15th to the 25th of September, sow the seed in an open border. Let the plants remain until the 20th of October, when they will be small, having four leaves. Plant them out four inches apart in a pit or frame, where you can protect them from the winter's frost; let them remain there until the first week in January, then prepare your pit to grow them in.

The pit should be eight feet wide, three feet deep in front, and four feet at the back. Get one load of leaves and one load of hot stable manure—I mean in this proportion; have the leaves and manure well mixed a week or two before you intend to use it, and then fill the pit to what will settle down to twelve or fourteen inches, take then and get your soil, old sod three parts, and one part manure—hog manure is the best; cover your bed over to the depth of at least eighteen inches, dig it nicely, then put on the sashes and keep them close for three days, when the little heat that the manure and leaves have created will be sufficient to give the plants a start. This is all that is necessary, for if there be too much heat, it will spoil all. Then mark out your bed, two rows to each sash, which should be three feet ten inches, and two inches for the wood work of the rafters.

It will be understood that the plants were pricked-out in rows, so that they could be taken up with the trowel without breaking any of the ball; set them five plants in the row, and two rows to each sash; you

may plant lettuce between each plant in the row, and a drill of short-top turnip radishes between them. After you have all planted, let the sashes remain close for a day or two, when they will begin to show they have taken to the ground. You must then give all the air you possibly can, even take the sashes entirely off in good weather. They must be covered every night with straw mats and shutters until the first of March, or longer, according to the season.

By the 10th of March they will require to be watered twice a week; leave off the sash every day you can: by the first of April give plenty of water, and by this means you can grow early cauliflowers as good as in any part of the world. I have grown them four, five, and nearly six pounds. For the truth of this statement, as to weight, etc., I refer you to the Transactions of the Pennsylvania Horticultural Society, from 1833 until 1836, both years included. I took the premium so long as I cultivated the cauliflower.

AN OLD PHILADELPHIA GARDENER.

Notes on French Gardening.

THE railway officials of France set us an example that we should do well more generally to imitate. At nearly every station between Paris and Tours, and on several other lines of railway, they have showy and neatly kept flower-gardens; and during the stoppage of the trains, it is interesting to observe the pleasure which the passengers take in them; Roses, Valerians, Rockets, Antirrhinums, Stocks, Pansies, and a good selection of free

blooming annuals are mostly to be met with. In truth, the French are fond of display; and this taste is probably aided by their climate, which appears favorable to the production of brilliant colors. Their gardens form bright spots in the landscape. At one of them I noticed a class of Pansies quite different in color to any that I have yet seen in England; they were, (if I may use the expression,) tortoise-shell, and bore much resemblance in their tints and markings to our best mimulus-es; orange, red, maroon, lilac, and some almost approaching to scarlet, variously blended upon yellow grounds, were very conspicuous; the plants were healthy, free bloomers, with the flowers large and not deficient in form. Among the multitude of roses, none produced a richer effect than Glante de Battailles, and Barron Prevost. The Persian yellow rose was more closely pruned than with us, and its energies being concentrated, the foliage and flowers were decidedly finer.

Among the annuals, few were more dazzling than *viscaria occulata*, and *Schizanthus retusa*; they were in clumps or patches, the former covered with rose-colored blossoms, rising about a foot high, the latter displaying large obtuse spikes; but the three great drawbacks to French gardens are their straight walks, stiff symmetrical beds, and the absence of good gravel.

At Tours, in one of the nurseries was a large bed of Sweet Williams, quite a march upon those hitherto grown; they were of nearly all hues, and the flowers instead of being flat on the top, assumed the form of the Normandy Candy-tuft, having large round heads inclining to be spiked, each head being double the usual size. The owner had no seed left, and to use his own phrase in reference to the collection, they were "*Le premier choix*."

In the vicinity of Paris, few villages offer a more enchanting display of hill and dale, vineyards and orchards, fields and gardens, interspersed with small detached country houses, than Fontenay aux Roses; oblique paths to the tops of the different hills, conduct the loiterer through a succession of well cultivated allotments; these are without hedges, and acres of strawberries and other fruits appear unprotected. It was a beautiful summer evening when I wandered through them, and conversed with the laborers; files of women and girls, with heavily laden baskets of fruit upon their heads, were winding

their way to the village, or the railway station; and numerous merry groups were seated under the trees, enjoying their evening meal, whilst parties of pleasure strolled in the distance toward one of the public tea-gardens, from whence issued sounds of music. The vines appeared remarkably healthy, and although not more than three feet high, were thickly covered with bunches of fruit, and gave promise of an abundant vintage.

Of the flower markets of Paris, I would only say that there are five, and each is held twice a week. No provincial horticultural exhibition in England that I have yet seen, pleased me so much as these markets; the best, perhaps, is that near the Madeleine. Flowers in endless variety, and of nearly every form and color, together with rich bouquets, attract numerous purchasers; the former are brought mostly in pots, and each is partially inclosed in a neat white paper envelop. But there were two descriptions of flowers, to which the French appeared very partial, and one of them I had been waging war with for the last fifteen years, to keep out of my garden; it was what we call the *White May-Weed*, and the French, the *Summer Chrysanthemum*; they are usually grown in large pots, make a great show, and serve to enliven the dark inner courts of many of the houses. The other was a *Myosotis* or Forget-me-not; very diminutive in its flowers, of a light blue, with a yellow metallic eye. These, I was assured, grew to the height of two feet, and when in full bloom the masses of little heads are cut off, with about three inches of stem attached, and inserted in pots, so as to form a round ball, resembling innumerable pins stuck in a light blue velvet pin-cushion. If my memory serves me, about £25,000 a year is taken in these markets, by the sale of their floral productions.

Gardener's Chronicle.

WORSHIP GOD WITH FLOWERS.—Flowers are memories of childhood, which accompany us from the cradle to the grave. I left my birthplace at the age of seven, yet the peonies, tulips and roses of my mother's garden are pictured in my mind with a vernal freshness. Teach your children to love flowers, and they will love home and all its inmates. Beautify the grounds around your dwelling with rich foliaged plants, and the bright blossoms of sweet flowers, and

the faces of all who look upon the scene will be lighted with smiles, while their hearts will worship the great Giver of all good and perfect gifts to man. If I could be the means of creating a general taste for gardening and love of flowers, I should feel as though I had been of more benefit to my country than all the military heroes of the present age. My dear sir! sweet sisters! worship God with flowers! As he loves all that is beautiful and good, so will he love you if you make your home lovely.—*The Plow.*

TRANSPLANTING EVERGREENS.

DR. J. A. WARDER:—I was highly pleased with the plain common sense views embodied in an article published in the February number of your excellent Review, entitled "Evergreen Trees for Use and Ornament:" and, although entirely unsophisticated in regard to writing articles for publication, yet, as an amateur, who has had some fifteen years' experience in the growing and transplanting live-oaks, cedars, magnolias, laurels, and orange-trees, etc., of extra large size, as also the *Ilex aquifolium*, and Cassine for hedges—all of which I flatter myself have been grown and perfected to as great an extent at "Oakland" as in any other place in the United States, (and which you were pleased to refer to in a most complimentary manner in your letter of October,) is my apology for this communication. And withal, referring to a subject less understood in the South than almost any other relating to horticultural matter, that of preparing and transplanting both evergreen and deciduous trees, of large size, by cutting and shortening their roots, tops, and lateral or inside shoots.

My practice has been to transplant all kinds of trees and shrubs at the earliest practicable period in the spring, before the sap begins to circulate, having previously selected my trees, always giving the preference to such as stand in isolated situations, as possessing a finer shaft, form, and foliage, and being more hardy. The holes for transplanting having been previously dug, and water provided on the spot, with force and machinery sufficient to effect the removal promptly, I proceed thus:—On the first cloudy day, or early in the morning, I marked the *north* side of the tree, so that it would be replanted in the same aspect and position in which it was found growing. A trench was then dug round the tree, and the roots cut off at as great a distance as convenient from the shaft, to protect as far as possible the ball of dirt to be retained, and the fibrous roots remaining. As the trees were excavated and lowered down, the lateral or inside shoots and limbs were carefully trimmed and pruned-out, and the top and leading branches cut-in, in such a manner as to retain a handsome oval form, and, at the same time, to *correspond* with the *quantity of roots not amputated*. The propriety of this course is the more apparent when we reflect that the leaves are the lungs of the plant, whose office it is to elaborate the sap, and that they must be continually supplied with nourishment by the fibrous roots, which, in the removal, having been to a very great extent destroyed, the proposition is self-evident, that matters thus situated must be equalized, or the trees dies. The ends of all bruised and injured roots, before transplanting, were re-cut with a sharp instrument, to enable them to granulate and form new fibers. "And as it is only through the agency of the ends of the small roots, that trees are able to take up the moisture of the soil—the rootlets once dried up are for ever useless;"

the importance of covering them over with mats is self-evident.

The trees were, in all cases, replanted with their northern aspect as found growing—in transplanting the roots were neatly laid out as originally found in the soil, and the earth puddled in around them with a sufficiency of water to close up all the holes and interstices, and the surface of the ground left slightly concave to retain water, the shaft of the tree covered with loose mats, and the surface of the ground with straw or leaves to retain moisture. The trees having been previously supported by firm braces to prevent the slightest disturbance of the young and fibrous roots by the action of the wind and local causes, in which case the trees would either die or become stunted and worthless.

All trees, either “*evergreen*” or “*deciduous*,” and whose roots are sparse and extend deep in the soil, had their heads cut off entirely, leaving the trunk a bare pole; they were then permitted to grow one or two years untouched, when all the small branches were cut off below the leading shoots, which were left to form the head of the future tree; a vast many of the live-oaks, laurels, and magnolias, planted at “Oakland” in this way, whose roots were sparser, and of which the entire tops were cut off, are now decidedly finer shaped and more vigorous in their growth than many of those before referred to.

The mutilation of the roots is a check given to the growth of the tree, by which it is, to a certain extent, stunted, and by beginning the operation of checking a year before transplanting, or even a few months, it is rendered more gradual. Trenching around and cutting the roots at a proper distance from the stem, and, at the same time, trimming-in the laterals, and heading-in the extreme shoots and branches, I have

found to be the surest and best of all methods for general purposes, and particularly well adapted to transplanting extra large live-oaks, magnolias, laurels, and orange-trees, etc. When *trenches* are opened around the trees, (to be removed in time,) and the roots cut, the *trenches should remain open*, as, by this means, the roots will have been prevented from cicatrizing and forming fibrous roots at the *extreme ends*; they will then form *intermediate* fibers between the shaft and the amputated part, by which means the ball of earth will be furnished with fibers, sufficiently *matted* to *retain enough of the earth* to protect them during removal.

Very respectfully,

W. DE FOREST HOLLY.

OAKLAND, near Mobile, April 6, 1852.

The Sunflower.

“THE sunflower is destined to be one of our greatest agricultural products;” as yet few know its value. I have raised and tested it, and think no farmer who has much land should be without it, for feeding various animals, and the oil it produces. It has yielded with me from 90 to 100 bushels per acre, manured the same as for corn. I plant in drills between three and four feet apart, and scatter the seed about six inches distant in rows—using from four to five quarts per acre.

When ripe, as the large heads begin to shell out, I cut it up and leave it scattered in rows to dry, and when thoroughly cured, draw it into my barn, handling carefully and placing it on an airy scaffold. When wanted, the seed will nearly all shell out by throwing down, and needs but little pounding. Clean in a common fanning-mill.

One hundred pounds of the seed yield 40 pounds of oil; one bushel will make a gallon of oil. I had part of my seed pressed out at a common oil-mill, and used it for burning in lamps and tested it well for painting. Our house had been painted a long time; and it wears fully equal to those where linseed is used, and the walls are left more glossy, as though a little varnish had been applied.

The oil-cake is nearly equal to any other

old there is nothing better to feed hens in winter than sunflower seed; they did not know what it was at first, but by mixing it with oats, they gradually grew fond of it and produced eggs more abundantly than usually on other food. The seed is well

known to be good for horses, and is well worth 50 cents a bushel to the farmer. I hope they will test this matter for themselves and am sure they will find it profitable to raise their own oil, etc., as I have done.—*Rural New Yorker*.

SHADING PLANTS.

In my younger days, when setting out celery plants, we docked off a number of leaves to prevent their flagging; we shaved off the points of our pink pipins for a similar purpose, and reduced the leaves of all cuttings on a similar principle. A grand hubbub was created among some of our young minds when a great gardener, now no more, demonstrated in the *Gardener's Magazine*, that *leaves* were the prime movers in the formation of *roots*; that the stripping these leaves from a cutting was worse than labor thrown away; and mutilating a celery plant akin to barbarism. The youngest reader of this work will only require a slight exertion to see through the enigma which distracted us amazingly. He will perceive that as there are two ways of telling a story, so the same place may be arrived at by many different routes: the old gardener, with his semi-savage lopping propensities was not such a numskull after all. He often did the best, with his limited means and conveniences. He well knew that fine healthy leaves could only be sustained by roots in full action and with an abundance of moisture within reach. He knew that, generally speaking, neither cuttings nor celery plants, unless peculiarly well treated, could at once possess the roots in action necessary to sustain transpiration and elaboration through so many fine leaflets, when these were exposed to solar agency. One sweep of his trusty knife lessened the number of these *robbers* of the stored up energies in his plant or cutting, and saved him many a jog-trot afterward, for seeing if all his shading-from-sunshine paraphernalia were put on and taken off at the right and proper period. His lessening the number of his leaves, lessened the chance of obtaining quickly a sturdy, healthy plant, if the necessary attention to securing a moist atmosphere, and shading from sunshine could have been attended to; but then he marvelously lessened his cares

and troubles respecting them, so that though he lost in time he gained in *labor*. He knew that these leaves evaporated; if he did know how, he had not the means to prevent them, nay of making them *absorb* as well as perspire.

The best gardener is he who suits himself to his circumstances, and makes the utmost possible of them. Studying trifles, he may do things very differently from his next door neighbor, and yet, at the end of a few months, a spectator who had never witnessed these operations would imagine they had been working all along in a similar manner. Thus tested, many new discoveries, and seeming differences, would resolve themselves into looking at an object from different points of view. The pages of this work furnish strong confirmations, though we can not now allude to them. Go beyond them, and what is more commonly found than this: "Shade everything in bright sunshine in summer," says one. "Nonsense" says another; "shade not at all; how can you expect your plants to be worth anything, if they receive not the *full* blaze of our sun, which even then is not so powerful as that to which our exotics are generally exposed in their own climes." "Shade according to the circumstances of your plants, and your requirements from them," says a third; and with him we coincide: and, if you can not shade, use other means, such as sprinkling or syringing, to prevent evaporation, and maintain a certain degree of coolness. "Shade ever" in bright sunshine in summer, is just as preposterous to us as "never shade at all." Thus, here are a number of cuttings with all their leaves on, protected from the atmosphere by bell-glasses, and inclosed besides in a pit or frame: allow them, even in these circumstances, the full force *now* of a midsummer sun; and, unless in exceptional cases, arising from the nature of the cutting, the leaves

will droop, because they can not derive moisture enough from the cutting to supply that outgoing from their evaporating surface:—continue a similar process from day to day, and death will ensue from complete exhaustion.

On the other hand, place your shading on and continue it on, and, as in the other case, exclude the atmosphere by your bell-glass, and you will find that your cutting does not flag at all: anon it seems to increase in length, and you are already dreaming of success, when lo, and behold! some fine morning you find it has gone at the surface of the soil, and not one single root, or an attempt to form one, has been made; it having resolutely refused to do the very thing you wished it to do. The little food within its reach you have taken care it shall neither digest nor assimilate, as that can only be done in light. The general rule then is, give shading to prevent a cutting, or a newly potted plant from drooping.—That effected, accustom it by degrees first to subdued, and then to direct light and air, as soon as it can bear it without flagging, that fresh matter may be thus assimilated, and be expended in roots and leaves.—Again, I have spoken of reducing air in extreme hot weather, in the case of plants growing. It is better to shade, and give beneath that shade as much air as possible, unless the weather is breezy, when we wish to retain them in bloom as long as possible. Another season when a shade for a few hours is of great advantage, is when, after a period of dull weather, we have at length a day of brilliant sunshine; many plants and forced fruits have been injured for the season, by not attending to this; when used to it by degrees, they will then stand any sun with impunity. Of course, unless in very extreme cases, such as these, we should never shade, when our object is to consolidate and ripen the wood or stems of a plant.

The neatest and best mode of shading pits and houses, is to fasten buntings or canvas to the top of the house, and then to a wooden roller in front, the roller being furnished at the end with a wheel, containing a groove for holding the rope rather more than the length of twice the width of the house.

The cloth being then let down, and the rope wound round the wheel, the pulling of the rope causes it to revolve upward, and

you can fix your blind in any position, by twisting the rope round a pin in front. For growing and flowering plants a nice temporary shading may be given by dissolving a very little whitening in a pail of water, and spirting it over the glass with a syringe. A man used to it will do one hundred square feet as soon as I can write a couple of these lines. The first shower removes it. To make it last the summer, it must have a portion of size, and be laid on with a brush. Do not use lime; it is no friend to glass or paint.—The best and neatest continuous shade for the summer months, is made from double size, obtained in the shape of a jelly. This is dissolved over a fire in an iron pot, with a very little, or no water added, and put on when hot by dipping the point of a brush in it, and then quickly daubing it on the glass. At a few feet distance it will not be noticed, and yet for most things it will be sufficient shade. Hot water must be used to remove it in autumn.—*Cottage Gardener.*

The Dandelion.

I HAVE been always a friend to the free use of the dandelion, and especially in the spring of the year, and have for more than fifty years at times prescribed it to patients. I will now give some more information about the article. Very early in spring I have found it to make excellent salad, and the roots and leaves make excellent beer.—The root is also made into a syrup for those weekly and consumptive. The dandelion is an excellent herb, of an agreeable taste, and when freely used in spring, is of great efficiency in preparing the system for the change of season. Some few years since, I had seed from Dr. Alair, of Aurora, and in taking a walk over my farm, took from a paper I had in my pocket, and occasionally scattered a trifle of it, and from this, in three years, acres of it were seen. I do not consider it in the least injurious to the growth of other grass; certain it is that there is in the same pasture an excellent yield of white clover, and it appears most luxuriant where the dandelion is most plenty.

To encourage the growth of the dandelion, I will state that there is a man in my native state, (Massachusetts,) who supplies the Boston market, and this from only one-fourth of an acre, which yields him an annual income of \$200.—*Prairie Farmer.*



The Vineyard.

VINEYARD CALENDAR.

It often happens with those who are undertaking a new piece of business, like that which this committee has assumed, that the energy of the locomotive presses forward in advance of the "time-table." So it may have been with us, in our anxiety to omit nothing that should demand your attention in the coming months. We may sometimes advise you to do those things in May that would not suffer by being laid over to June. In other words, we have been a little ahead of the months in our directions as to your work in the vineyard. This, however, is a venial fault, and will be overlooked: at any rate, should these pages be recurred to in future years, the varying seasons may render them exactly applicable to an earlier opening of the vernal dance.

Tying.—This operation, advised to be attended to last month, must still continue to claim the vigneron's attention. If he wishes to preserve his young shoots, rich in promise of fruit for this year and wood for the next, let him be especially jealous of all intrusions, and provident against injuries. To this end he will frequently pass through the vines with the wisp of damp rye straw, cut into lengths of about twenty inches, and as fast as the shoots grow he will tie them up to the stakes. This operation should be repeated every week or two; for the union of the new and old wood is so feeble at this stage of

growth, that the least force will rupture the connection, and sacrifice the rich prospect.

Sprouting and Thinning.—If the tender-hearted, or those who were anticipating hailstorms and other injuries, failed to attend to the duty of thinning-out the superabundant shoots during May, let them at once see to their vines, ere the whole force of the season shall have been diffused among a great number of weak shoots, or, for want of guidance and direction, shall have taken a lead in the wrong direction. This summer pruning, is a very important matter: and much of your future success will depend upon judicious management of the vines in this particular.

Rub-out all weak shoots, and such as have no "seed" or prospect of fruit; also remove the weaker where duplicates appear; but observe especially to provide wood for the next year, and so arrange your summer pruning that two good shoots shall grow out from the lower part of the bow and stock, and endeavor to have these well balanced, one on either side, so that their descending sap shall feed the stock and roots equally on all sides. If from any accident your low shoots are deficient, or if the stock, from previous neglect, have become too tall, now will be a good time to select the strongest shoot among those commonly called water-sprouts, which

American wine growers, from its perusal and the application of its "theory and practice." Of the importance of such a work, there need be no question; that is to say, a work adapted to our country—its soil, climate, and peculiarities; a work that is *practical* in its *theory*, and whose theories may readily and unerringly be reduced to practice.

Here, then, is the book, long sought for, found at last—produced by Mr. McMullen. We do not know this gentleman, it is true; but take it for granted that he is aware of the code of honor pertaining to authorship, and of all the pleasures, pains, and penalties thereunto belonging; and as he has set himself up as a target, he must expect to be shot at; and if he gets hit, we hope he won't dodge—afterward. It is reasonable to suppose that Mr. McMullen is well informed, thoroughly "posted up" in regard to the peculiarly interesting subject which he has selected for his labors; that he is a practical "wine-cooper" himself and a thorough-bred vintner; all this we take for granted.

It is true, his name does not indicate that the fragrant breeze which floats over the golden fruit gardens of old Spain, fanned his infant brow—that the blood of a true Castilian flows in his veins—that the sunny vine-clad hills of *la belle* France, the garden of the world, was "the spot where he was born"—or that among the romantic windings, shadowy steeps, and crumbling ruins of the Rhine, his boyhood's years were rich in teachings, from sources that have taught the world so much that the world knows of "one of Heaven's best gifts to man." But rather does it tell us of the land of the "heather,"—"Auld Scotia"—the land whence comes all our knowledge of "Usquebaugh," "Scotch Whiskey," and "tippenny." But what of

all that?—it is "knowledge that makes the man," and the man made the book. Let us ask who made the knowledge—or where did he get it? or has he really obtained or imparted any?—ay, that is the question.

We are not giving our opinion in this matter without a considerable amount of reflection; we do not wish to be regarded as impertinent or inquisitive, nor to insinuate that the gentleman has obtained his information entirely from Encyclopedias, and similar sources; but we do mean to say, that, in our judgment, Mr. McMullen is not a practical vine-dresser or wine-maker; and that his labors thus far (we speak merely of the book before us) are nothing more than a compilation from well-known standard works upon the subject of foreign wines and liquors, and is very suitable for those who desire to obtain this kind of information, and save themselves the trouble of consulting Brande, McCulloch, Ure, *et alias*, in order to find facts which are not very generally known.

But, if the gentleman's "theory and practice" were found deficient, we might reasonably suppose that his "historical" researches would have been more complete, and that he would have appealed to some source of knowledge in regard to the history of the wines, and the wine interest of America.

But here, again, are we at fault. There is not a chapter, paragraph, sentence, line, nor word within its lids designed to convey a single idea of the great wine interest of this country, and particularly of that in the vicinity of this city.

We can only suppose that his publishers, or his guardian spirit required him to do as was done once upon a time when the play of Hamlet was to be performed—in consequence of the *incompetency* of any member of the company to sustain the part

of the youthful Dane, it was announced that "the character of Hamlet would be omitted by particular request." So in this case; the only really important part of such a work, to us American wine growers at least, has been omitted, and, probably, for similar reasons.

A thought strikes us, however. Possibly the gentleman intends causing us an agreeable surprise, by publishing a work devoted exclusively to American wines, and the very large wine interest at present existing in this country; that he is, perhaps, now buckling and girding on his armor to come forth as a missionary of light and knowledge to us heathens hereabout, and to give us "theoretical, practical, and historical" instruction and information in regard to our far-famed "Catawba."

That we need some addition to our stock of knowledge on this subject, there is not a doubt; indeed, we have had serious thoughts of seeking an interview with the *sober and learned* Royal Commissioners of the late London Exhibition, with a view to make amends for our manifest deficiencies; for when specimens of our wines, made from the Catawba grape, were sent to London, under the sanction of the American Commission, and in supposed accordance with the regulations to admit wines from "unusual sources," we found that we had misapprehended the subtle wisdom and meaning of the Royal Commissioners, and that "unusual sources" meant wines made from other fruits, vegetables, or materials than the grape!!—turnips, forsooth?

This was decidedly rich—just, however, the kind of arrogant stupidity that might have been expected from such a source.

Wine from anything but the grape! As if any other fermented juice is wine.—Preserve us, Bacchus!!

That such a work as this—ostensibly an American book—designed for the practical

use of American grape growers—published in New York by an American house, should be so completely deficient upon the very point of greatest interest to us in connection with this subject, is really quite remarkable.

That the book has merit, as a compilation, we admit; that many of the facts therein stated are interesting and correct, we also admit; but as "a practical, theoretical, and historical hand-book of wines," it is deficient and unsatisfactory, to an extent, that is not compensated for by its acknowledged merits. It would probably be out of place to anticipate in this article the statistics and facts in relation to the grape culture and wine making in this vicinity, now being prepared by a competent hand, and which will shortly be made public; otherwise we should take great pleasure in offering, for the edification of the public generally, and Mr. McMullen in particular, a statement from materials in our possession, which would go to prove the great extent and importance of this branch of industry. We may say *en passant*, however, that this culture embraces more than a thousand acres of vineyards, many hundreds of laborers, and that there is a value embarked in this business alone, in land, material, fixtures, stocks on hand, etc., that will reach half a million of dollars. We know of three individual concerns, whose vineyards, wine-houses, stocks, and materials, will reach two-fifths of this sum.

In conclusion, we venture the prophecy, that the culture of the grape, and the manufacture of wine in the valley of the Ohio, in the vicinity of this city, is destined to reach a point of importance not yet dreamed of; and which will ere long exert a moral and healthful influence upon society, that the friends of temperance have thus far vainly sought to attain.

CINCINNATI, April, 1852.

Transactions.

THE CINCINNATI HORTICULTURAL SOCIETY.

Has continued its very agreeable meetings and useful discussions during the past month. The reports, as they appear in the newspapers, are read with great interest by our citizens, and serve to diffuse much valuable information. The crowd of matter on hand precludes their appearance in this number, that contains the account of the Spring Exhibition, which has just closed.

This has been a very pleasant meeting, and the energetic efforts of a few members have presented a very respectable display. So early in the season, it consisted chiefly in green-house plants and vegetables, the latter not in such profusion as we hope to see them in future.

The Strawberries were not yet ripe, and their absence was felt by all the visitors who have been in the habit of studying them upon our tables. Of other fruits there were green Gooseberries, and a few Apples of long keeping varieties, among which the most conspicuous were the Winter Sweeting, a new variety, and some fine plates of the Northern Spy, from Jas. H. WATTS, of Rochester, N. Y.

The Spring Exhibition was held, as indicated in the previous proceedings, on the 12th of May. Many of the members had felt much discouragement on account of the severity of the winter, and the backwardness of the season; but, as this was avowedly a green-house exhibition, it was determined by some of the most energetic members to comply with the arrangements, and a very respectable show was made, notwithstanding the absence of several upon whom the society has long looked as the ablest supporters of such meetings, on account of their fine array of plants. As it was, the chief contributors were mostly those whose collections are grown for market, and they had been already very much thinned by the spring sales, and much injured by the recent hail-storm which had destroyed the glass, and consequently exposed the foliage and flowers to the outdoor air and winds.

This energy and perseverance on the part of the gardeners, are truly praiseworthy. The handsome displays made, despite of every discouragement, entitle the growers to high praise, and should secure to them the best wishes of the society, as well as the best custom and patronage of the public.

This fair was purposely held thus early, on account of the green-house interests, without the expectation of deriving any extrinsic aid from the gardens—whence, however, gorgeous displays of tulips and some other early flowers were furnished. Heretofore the vernal exhibitions have been held so late that the hardy roses and the strawberries constituted an important feature; these will now be brought forward at a second meeting in the first week of June.

The efforts of those who contributed can not be too highly praised, if the difficulties to which they were subjected be taken into consideration. Some of them, too, are new contributors; and even those who had little to bring, should be commended for their good intentions and excellent aid.

To make more especial observations or more pointed remarks might be considered invidious, in these introductory paragraphs. The lists of contributors follow, from which it may be seen who have continued to feel the best interests of the society most deeply at heart, and what they have been able to spare from their collections, some of which have suffered terribly by the hail, besides the heavy drafts previously made upon

them by almost unprecedented spring sales. The absence of those who were not represented upon the tables, was sincerely regretted; some felt that they had little to exhibit; others, that they had lost too much to venture the injurious exposure of their plants to the dangers and injury of the transportation, and the confinement of an exhibition room—a danger and injury which few can appreciate who have not realized it in their own favorite plants. All these parties will, it is hoped, continue to feel a deep interest in our society, which has proved itself capable of making a respectable exhibition under such great discouragements, and will again join with us in our future efforts to please the community, and foster among them an increased love for these beautiful objects of natural history, and the charming art applied to their perfection.

It is sincerely hoped that our extensive, successful, and celebrated vegetable growers, who give our markets a world-wide celebrity, will not fail to lend their aid to render the future exhibitions of the Horticultural Society more and more interesting by adding their quota of handsome and attractive articles to an amount that shall occupy at least one side of the room, to the delight and astonishment of all beholders.

At the same time, there was a very interesting exhibition of the WESTERN POULTRY ASSOCIATION. This was held in an adjoining room, which was not needed by the horticulturists, though usually occupied by them on such occasions. It is very much to be regretted that this concurrence of the meeting, though by no means a consociation of the two societies, should have been unsatisfactory to some of the members, who feel scandalized by the arrangement. Now it is true that the odor of poultry is not so agreeable to the olfactory of most folks as that emanating from flowers; but it is equally true, that, at the present time at least, while the community are especially excited by the poultry mania, the people do take a great interest in looking at fine fowls; but we garden-folk should feel no jealousy about it—rather should we have all sails set to catch the passing breeze, and by no means neglect to take advantage of the tide of visitors drawn out by a rival attraction, and receive the tribute willingly paid in passing our doors, which indeed opened an asylum to many who were glad to escape from the noisy and unpleasantly perfumed room to our wider and more elegantly quiet retreat.

GREEN-HOUSE AND STOVE PLANTS.

From W. HEAVER:

6 *Pelargoniums*—Hebe, King (Gaines,) Fanny Ellsler, Lady Napier, Miss Percival, and 2 others.

Geraniums—2 Tom Thumb, Lucia Rosea, Ivy Leaved; Clematis Sieboldii, 6 seedling Cinerarias, Justicia carnea, Mimosa pudica, Calceolaria angustifolia, Polygala cordata, Jasminum multiflorum, 2 Alstræmeria pelegina, Azalea Jacksonia.

Fuchsias—Napoleon. Admirable, Western Bride, Fair Rosamond, Magnificent, Snowdrop, and 2 others, 10 Herbaceous Calceolarias, and 2 Shrubby ditto; Tetratheca verticillata, Begonia fuchsioides, Dodecatheon Meadia, Brunfelsia americana, Leschenaultia formosa, Sollya heterophylla, Spirea lanceolata.

By John SAYERS:

Seedling Heliotropo, new and fine; 2 Petunias, Fuchsia, Azalea indica, Justicia carnea, Begonia carnifolia, Calceolarias, Ficus elasticus, Wiegela rosea.

24 *Pelargoniums* and *Geraniums*, including 2 Helen, Miss Holford, Miss Percival, 2 Hebe, 3 King, Queen

Bess, Hero, 2 Fanny Ellsler, Snowflake, Constellation, 2 Lucia Rosea, 2 Camilla, Sultana, Queen of the West, 2 Juliet, Black Dwarf.

THOS. KNOTT presented :

12 Pelargoniums, Aucuba japonica, Tropæolum tricolorum, Clematis Sieboldii.

WM. ORANGE :

Roses—Malmaison and Devoniensis.

A. H. ERNST :

25 Roses of different varieties.

S. S. JACKSON exhibited :

Begonias—Parvifolia and hydrocotifolia.

Fuchsias—Carolinna, 2 Snowdrop; Habrothamnus elegans, Sollya heterophylla, Euphorbia splendens, Abutilon striatum.

Clematis—Sieboldii and alba plena, Boronia viminea, Ixora coccinea, Leschenaultia formosa, Bletia hyacintha.

Calceolarias—3 Angustifolia, 3 Meteor; Sarracenias, 2 Petunias Sun dial, Cineraria Cerito, and 8 seedlings unnamed.

Verbenas—3 Defiance, Beauty Supreme, Iphigene, Royal Purple, Exquisite, 3 Reine du Jour, Kossuth, Maria Louisa, Bicolor, all finely grown to a single stem.

22 Pelargoniums—Mrs. Clay, Celestial, Sir Walter Raleigh, Harry Smith, Acme, Miss Holford, Delaware, Admiration, Mary Queen of Scots, Black Dwarf, Arabian, Rosamond, Duke of Cornwall, Utolmahi, Forget-me-not, Lucia Rosea.

Azaleas—Elegans, Smithii, Maitlandia, Alba Perfecta, Phœnicia, Alba, 5 seedlings, new; Nurembergia filicaulis, 2 Tree Violets, Centradenia rosea, Salvia splendens major, Oxalis floribunda.

From GEO. HARBROX, gardener to Hy. Brachman :

Sutherlandia fruticosa, 2 Russelia juncea, Myrtus communis, 2 Justicia carnea, 2 Acacia armata, Plumbago capensis, 3 Heaths, 2 German Stocks, 2 Mimulus moschatus, Mespilus japonica, Solanum, 1 large Pittosporum, 2 smaller ditto, 1 striped ditto; 3 Heliotropes, Abutilon striatum, Aloe spicatum, Rochea falcata, Begonia, 4 Ficus elasticus, Scarlet Geranium, 4 Impatiens balsamina, and other large plants.

ANTHONY PFEIFFER showed :

12 Antirrhinums, 26 Pansies, 4 Neriums, 14 Cinerarias, 4 Heaths, Camellia japonica, 3 Cactus Jenkinsia, 2 ditto speciosus; 2 Melocacti, 6 Calceolarias, 2 Rochea falcata, Azalea indica, 10 Pelargoniums, Spirea lanceolata; 2 Myrtus communis, 3 Metrosideros, 4 Auriculas, Fuchsia, Phlox Drummondii, Mesembryanthemum, 3 Gladioli, Rose Geranium, 2 Heliotropes, Candytuft.

Roses—21 Remontants, 15 Bourbons, 6 Teas, 2 Noisettes, 2 Mosses, choice varieties.

D. McAVOY showed :

Pelargoniums—Camilla, Hero, Desdemona, Sultana, Hebe, Juliet, Pulchellum, Helen, Miss Holford, King, Queen of the West, Alexandrina, Dowager Queen, Lady Cooper, Tam O'Shanter, Jewess, Sylph, Nymph, Snow Flake, Conflagration, Fanny Ellsler, 12 scarlet—Tom Thumb, Huntsman, Giant, 20 Mignonettes, 30 Sweet Alyssum, 4 Tree Violets, 8 Verbenas, Antirrhinum, Pyrethrum, Ageratum mexicanum, 6 Petunias of 2 varieties; 4 Heliotropes, 10 Roses, 3 Calceolarias, 4 Fuchsias, Maurandia Barclayana, Abutilon striatum.

From N. LONGWORTH :

2 large Caladium esculentum, 2 Abutilon striatum, 2 Plumbago capensis, Tradescantia zebrina, Begonia incarnata, Ruellia formosa, 2 Lobelia gracilis, Canna indica.

CUT FLOWERS, DECORATIONS AND BOUQUETS.

N. LONGWORTH: A large bunch of Dodecatheon Meadia, a domesticated wild flower of great beauty.

A. H. ERNST: 20 varieties of Tulips, Iris suziana, Clematis agarea grandiflora.

Mrs. FLAMEN BALL: 9 varieties of fine Tulips.

Mrs. McAVOY: 1 large basket of flowers, a bunch of scarlet double Thorn, 2 bunches of Mignonette, 1 of greenhouse flowers.

T. V. PETICOLAS: Devoniensis and Harrison Roses.

EDMUND CRAIG, Cheviot Gardens: 6 vases of Tulips, 30 varieties; a fancy wreath of evergreens.

A. PFEIFFER: Tulips, 42 varieties; Verbenas, 49 seedlings.

Mrs. HEAVER: 2 Pyramidal hand bouquets, and 19 round hand ditto; 2 stands of tulips, and a large number additional afterwards.

By Misses ORANGE: Vases of wild flowers, nearly 20 varieties, embracing many kinds domesticated by them, from the prairies of Illinois, and 12 bouquets additional.

A. PFEIFFER: A Floral Design—1 large and 6 smaller pyramidal bouquets of Tulips; a display of 14 round and 6 flat hand bouquets, and 32 additional supplies.

JNO. & ISAAC JACKSON: 2 hand bouquets, and additional supplies.

Mrs. McAVOY: 2 fancy stands, 2 vases evergreened, 1 basket of cut flowers, 1 bunch of Double Thorn, 2 bunches of Mignonette, 1 bunch of Calycanthus, and 1 bunch of green-house plants, etc.

R. BUCHANAN: Scarlet Horse Chestnut, Fringe-tree, and other flowers.

REPORT OF THE FLOWER COMMITTEE.

The ravages of the early and late frosts of this season among the flowers, followed by the hail-storm with its burglarious assault upon the green-houses, having had so dispiriting an influence upon many of our florists, that, despairing of being able to make the Spring Exhibition creditable to the Society, they proposed an indefinite postponement of it, fearing, that if they should

"Call the vales, and bid them hither cast
Their bells and flowerets of a thousand hues,"

it would be like calling up spirits from the vasty deep; that it would not be an effectual calling.

A majority of the society, however, determined that it would be best to fulfill their engagements to the public, by being punctual to their day; and the will of the majority, in our country, can not be successfully resisted.

The exhibition, although wanting the powerful aid of some of our early and most efficient friends, viz.—Messrs. Resora, Hoffman, and others on which we have been accustomed to rely with confidence, has, notwithstanding, been so respectable, that the society not only loses none of its well-established reputation, but has strengthened its credit, by showing that it can endure an extraordinary run of ill-luck, without failing to meet its engagements.

The Flower Committee, in addition to giving their awards of prizes as required by the printed Prize List for the current year, consider it their duty to make honorable mention of a number of plants in the exhibition, to which they could not by the rules award premiums, viz.: the Mimosa pudica, Calothamnus villosus, Tetratheca verticillata, and Polygala cordata, (in bloom since December,) by Mr. HEAVER, together with some fine Cinerarias, and the magnificent scarlet Geranium, Tom Thumb. Also, beautiful specimens of the Dodecatheon Meadia, exemplifying the susceptibility of our native wild flowers to improvement by cultivation, from Mr. LONGWORTH. And from Mr. ERNST, a fine specimen of Iris suziana. Among the cut flowers were Mrs. McAVOY's double-flowering hawthorn, with a variety of others for bouquets; also a quantity of wild flowers from Misses ORANGE, including twenty varieties; to these ladies, with Mrs. HEAVER, the society is indebted not only for flowers, but for their labor and taste in arranging them.

Mrs. F. BALL's display of Tulips included some remarkably fine and rare varieties; and Mr. EDMUND CRAIG, of Cheviot Gardens, a new contributor, exhibited a great variety of these gorgeous flowers. Mr. PFEIFFER's magnificent design, composed of a large and several small pyramids of Tulips, has attracted much admiration, and is entitled to the award of a prize of \$5 00.

The following awards have been made by the committee, in conformity with the published list of prizes for 1852:

Tulips—For the best display of varieties of bloom, \$2, to A. H. ERNST; for the second-best ditto, \$1, to A. PFEIFFER.

Pansies—For the best display, \$3, to A. PFEIFFER.

Antirrhinums—The first premium of \$2, and the second ditto \$1, are awarded to A. PFEIFFER, for his fine collections.

Cinerarias—For the best six varieties, in pots, \$2, to S. S. JACKSON; for the second-best ditto, \$1, to A. PFEIFFER.

Roses—For the best 24 varieties, in pots, \$2, to A. PFEIFFER.

Fuchsias—For the best 6 varieties, in pots, \$3, to WM. HEAVER; for the best specimen plant, \$1, to S. S. JACKSON.

Calceolarias—For the best 10 varieties, (herbaceous,) in pots, \$4, to W. HEAVER.

Pelargoniums—For the best display, \$8, to JOHN SAYERS; for the second-best, \$5, to THOS. KNOTT; for the best 3 scarlet, in bloom, \$3, to D. McAVOY; and for a P. Lucia rosea, \$1, to WM. HEAVER.

For the best collection of stove and green-house plants, exclusive of all for which premiums are offered, \$12, to S. S. JACKSON; for the second-best collection, \$6, to WM. HEAVER; for the third-best, \$4, to A. PFEIFFER. A gratuity of \$3 is also awarded to D. McAVOY, for his display of greenhouse plants. A gratuity of \$3 is awarded to H. BRACHMAN for a display of plants from his green-house. A gratuity of \$1 for the Wiegela rosea, and another of \$3 for a beautiful new seedling Heliotrope, are awarded to JNO. SAYERS.

Bouquets—For the best pair, \$3, to JNO. and ISAAC JACKSON; for the second-best, \$2, to Mrs. HEAVER.

The Committee also think it due to Mr. PFEIFFER to add, that in addition to the prizes awarded, they consider him entitled to the thanks of the Society for numerous fine bouquets, and for his labor and pains in furnishing decorations.

J. P. FOOTE, { For the
WM. COX, { Committee.
J. A. WARDER, }

At the meeting of May 22, it was resolved that silver cups with suitable inscriptions be awarded to Mrs. HEAVER and Mrs. McAVOY, for their energetic aid at the recent exhibition.

REPORT OF THE VEGETABLE COMMITTEE.

The Vegetable Committee of the Cincinnati Horticultural Society beg leave to make the following report for the Spring Exhibition, May 12, 1852.

The displays of vegetables at all the previous vernal exhibitions of the society have been too small to do that credit to our cultivators, and to our fertile soil and benignant climate, to which they are entitled. The regrets which we have felt for the negligence of our gardeners on former occasions have been renewed and increased by the meagerness of the present exhibition. It comprises, however, some very creditable specimens of early vegetables, viz: three varieties of Lettuce, one of which is new in our market, by MICHAEL RICE, gardener to Mr. Joseph Longworth.

Excellent specimens of Asparagus, by Mr. MOTTIER.

A Marrowfat Squash of last year, in a perfect state of preservation, by Mr. MOTTIER, with specimens of

Radishes, Cucumbers, and Rhubarb, to which the prizes have been awarded as follows:

Lettuce—Best 6 heads: M. RICE, prize \$1 00.

Rhubarb—Best six stalks of the Victoria Rhubarb by Dr. S. MOSHER; very fine, weighing without the leaves four pounds and ten ounces: for which the Committee awarded a gratuity of \$1 00.

Cucumbers—Best pair of Cucumbers, to M. RICE, a gratuity of \$1 00.

Asparagus—Best 3 bunches, 25 stalks each, the largest measuring 3½ inches in circumference, to JNO. E. MOTTIER: the Committee awarded a gratuity of \$2 00.

Second best 3 bunches, to G. SLEATH: gratuity of \$1 00.

Mushrooms—3 plates, by A. McAVOY: gratuity of \$1 00.

Pumpkin—Pumpkin, by A. McAVOY: gratuity of \$1. Kept from the year 1851, in a good state of preservation. Submitted by the Committee,

P. CONSIDINE,
A. PFEIFFER,
WM. COX,
H. LIVES.

Ohio State Board of Agriculture,

Have just held a meeting in Cleveland. The following gentlemen were in attendance:

President—A. Watts.

Treasurer—S. Medary.

Recording Secretary—G. I. Gest.

Managers—C. Springer, Philo Adams, M. L. Sullivan, R. W. Musgrave, J. M. Edwards, William Case.

Col. S. Medary resigned his office of Treasurer, and M. L. Sullivan was elected in his place; the Board elected Col. Medary, President pro. tem., in consequence of the intended voyage of Mr. Watts to England.

A Committee on Fruits and Vegetables was appointed, the majority of whom are to reside at Columbus. Their duty will be to examine such fruits and vegetables as may be forwarded to them, with a view of recommending those who present them, to the Board, for premiums. It is hoped that a judicious selection will be made; the names are not given.

The Horticultural Premium List of last year was adopted. Arrangements were made for the State Fair, and beautiful grounds selected. Daniel Webster has been invited to deliver the address.

American Pomological Congress.

A CIRCULAR has been issued by the President of this association, from which it appears that the next session will be held in the city of Philadelphia, on Monday, the 13th day of September, 1852, at 10 o'clock, A. M., in the Chinese Museum building, Ninth street, below Chestnut.

The Pomological, Horticultural, and Agricultural Societies throughout the United States and Canada, are invited to send such number of delegates as they may deem expedient. And the delegates are requested to bring with them specimens of the fruits of their respective districts.

Packages and boxes of fruit for the congress may be directed to the care of Thomas P. James, Esq., No. 212, Market street, Philadelphia, should the owners be unable to give their personal attendance.

The various State Fruit Committees will transmit their several reports to A. J. Downing, Esq., general Chairman of the whole. The Chairman of each state committee is authorized, where vacancies occur, to fill up the number of his committee to five members.

The President of the Cincinnati Horticultural Society was directed to appoint five delegates.

Cuyahoga County Agricultural Society.

The annual Exhibition will be held in Cleveland, on Wednesday and Thursday, the 6th and 7th days of October next.

A list of articles, on which they offer premiums, is furnished in the Ohio Farmer, a capital paper, published in Cleveland.

The committees are already appointed, and very properly printed with the Schedule of Premiums.

Franklin Co. (Ia.) Agricultural Society.

THERE was a very spirited meeting at Brookville on the 1st of May, at which the discussions possessed unusual interest. Portions of the address appear in this number, and, of the flattering resolutions passed by the members, it will not be proper to make any further mention, as, though exceedingly gratifying to me, they were rather too personal for publication here.

Kentucky Agricultural and Mechanical Association.

At the annual meeting held at the court-house in this city, the following officers were elected for the ensuing year:

President—Benj. Gratz, Esq.

Vice President—H. C. Payne, Esq.

Secretary—J. Harper.

Treasurer—E. D. Sayre.

Directors—R. Allen, of Jessamine; James O. Harrison, Joseph Wasson, Charles Innis, S. P. Kinney, Samuel Byrant, Joel Higgins, James G. Kinnaird, Nelson Dudley, H. T. Duncan, Lexington.

Kentucky Statesman.

Wisconsin Agricultural Society.

President—Hon. Henry M. Billings, of Iowa county.

Vice-Presidents—N. B. Clapp, of Kenosha; Orrin Denamore, of Rock; Martin Webster, of Dodge.

Corresponding and Receiving Secretary—Albert C. Ingham, of Dane.

Treasurer—Chauncey Abbott, of Dane.

At a late meeting of the Executive Committee of the Wisconsin State Agricultural Society, the following action was had on the topics specified.

That the secretary be instructed to correspond with the citizens of such places as desire the location of the next Fair.

That \$800 be apportioned for premiums at the next annual Fair, and that one-fourth of the premiums consist in agricultural, horticultural and mechanical books of approved merit. [!!!]

That the Legislature be memorialized for the passage of a law extending the aid of the State to this Society.

That James Duane Doty be selected to deliver the address at the next Fair, and that Michael Frank be his alternate.

That Messrs. Ingham, of Dane. Pinckney, of Fond du Lac; Johnson, of Kenosha; Tiffany, of Milwaukee; and Baxter, of Sauk; be appointed delegates from this Society to attend the next annual Fairs of New York, Ohio, and Michigan, and that they report to this Society.

That the Legislature be memorialized for the establishment of an Agricultural Department in the State University.

Detroit Horticultural Society.

At the annual meeting of the Detroit Horticultural Society, the following persons were elected officers for the present year:

President—A. C. Hubbard.

1st Vice President—Thos. Lockwood.

2d " "—F. Raymond.

Treasurer—Stephen Smith.

Recording Secretary—Chas. Betts.

Corresponding " "—Bela Hubbard.

Judges on Fruits—James Dougall, A. C. Hubbard, A. Bradish.

On Trees and Shrubs—E. P. Hastings, C. C. Trowbridge, W. A. Bacon.

On Green House Plants—J. Ford, M. H. Webster, T. H. Hinchman.

On Plants indigenous to the State—Bela Hubbard, J. C. Holmes, A. R. Terry.

On Vegetables—T. Hall, Wm. Adair, J. S. Bagg.

The Society has now effected a substantial, and we trust a permanent organization. An excellent room has been secured for the exhibitions of the Society, the present season; and every effort will be made to make them interesting and instructive.

The advantages of having an energetic Horticultural Society are too obvious to remain unnoticed. Practical men believe now, that fruit growing, taken all in all, is one of the most profitable and pleasurable departments of husbandry. Every body is planting trees; nurseries are springing up in every part of the State; yet they each sell double the number of trees that either did three or four years ago. Our trees first planted are coming into bearing, and the fine character of the fruit gives great encouragement to extend operations. And now a Horticultural Society is the result of sheer necessity.

The Society have decided to hold five exhibitions the present season; one in each of the months of May to September, inclusive.—*Mich. Farmer.*

Genesee Horticultural Society,

AT ROCHESTER, NEW YORK.

The Society held their first summer meeting on the 10th of May. Green-house plants and early vegetables constituted the exhibition.

ELLWANGER & BARRY had of—

Hyacinths, 30 varieties, double and single; many new kinds which were pronounced the finest ever shown here; in Rhododendrons; Cinerarias, several fine seedlings; Agaleas; Crown Imperials, 6 varieties.

C. J. RYAN, of the Rochester and Charlotte Plank Road Nursery—

Spirea prunifolia; Petunias, Prince of Wales, etc.; Roses, Le Reine, and other fine varieties; Verbenas, Reine du Lour, Defiance, etc.; Cinerarias, Beauty of Newington, etc.; Hyacinths, Narcissus, and Crown Imperials.

JOHN DONNELAN, of Hanford Landing Nurseries—

Petunias, large White, Bianca, Baron Prevost, and Enchantress—the largest and most splendid display of this flower ever shown here; Verbenas of several varieties, with Roses and Pelargoniums, besides two beautiful hand bouquets of rare flowers, arranged by Mrs. ROBERT DONNELAN.

JOHN DONNELAN exhibited, of vegetables—

Palestine Lettuce; Rose and yellow Turnip Radishes, a new variety lately from China; besides Giant Rhubarb and Asparagus, all well grown and tender.

C. F. CRUSMAN exhibited—

Victoria Rhubarb; Asparagus; early short green Cucumbers, early long green ditto; and cabbage-head Lettuce.

A. FROST & Co. exhibited—

Fine specimens of Japonica cryptorian, and standard Roses.

A fine collection of oil-painted Fruits, by Mr. VAN DORN, artist, were shown by him, of the Northern Spy, Canada Red, and Baldwin Apples; and fine and well kept specimens of the Northern Spy Apples by

J. H. WATTS. The exhibition for Roses takes place in June, (19th); and the Society, with Mr. BARRY for their President, anticipate that they will be able to add to the interest of former seasons, by superior displays.

J. H. WATTS.

The Hennepin Fruit Association

Met and organized on the 13th of last December, the following is an abstract of their proceedings, condensed from the *Prairie Farmer*.

The Association to be governed by such rules and regulations as may from time to time be found necessary. Dr. John Pulsifer was chosen President, and Smiley Shepherd, Secretary.

A great variety of apples were presented for examination. The terms of comparison are those adopted by the Congress of Fruit Growers, and apply principally to the quality of the fruit, rather than its productiveness or suitableness for general cultivation.

Vandervere, very good; Wine Sap, good; Rhode Island Greening, inferior, not worthy of cultivation.

Rambo, very good; a seedling without name, of high promise (Parmela); Milam, good.

American Golden Russet, best; Priestly, good; Michael Henry Pippin, good.

Honey Sweeting, best; (thought, as a sweet apple, to surpass by far anything commonly known); Sweet Vandervere, very good; neither fruit or name recognized by standard writers.

Blue Pearmain, very good; Yellow Bellflower, very good.

MARCH 11th, 1852.

The Association proceeded to examine and test fruit presented.

Michael Henry Pippin, good; Virginia Greening, good; (fruit not much known): specimens shown and tested promise well, particularly as a keeper.

Baldwin, good; American Golden Russet, best; Sweet Vandervere, good; Priestly, very good.

Gravenstein, (erroneously,) very good; the fruit large and fair, of a greenish yellow color, and is in season in January.

Lyman L. Parmelee again presented his seedling; after testing it, it was voted best, and ordered to be called the Parmelee apple.

Roxbury Russet, (genuineness doubted,) very good; Chapman's seedling, (medium size, green ovate,) good; has been kept good and sound, without shriveling or losing flavor, until September.

Esopus Spitzenberg was called for, and presented by many. A wide difference was noted in specimens from different localities. The best were voted very good.

The Green Newtown Pippin was called for, examined and tested, and was voted very good.

Smiley Shepherd presented a seedling named the Red Oak Russet, voted very good. Herfordshire Pearmain, voted unanimously *very best*. The Janet (Rawle,) was voted good.

Milton Robinson presented the Long Island Russet from James G. Ross, voted very good; fruit large and fine; not recognized as described in any of the books.

H. K. Zenor presented the Newtown Pippin, (erroneously named). It was received and compared with genuine specimens, and found slightly different in form. In testing, it was pronounced equal in flavor. The fruit is larger, fairer, and more uniform than the genuine. The tree is of thrifty growth, and an early and great bearer.

A great many specimens of different well known and some unknown, as well as seedling varieties, were presented and partially compared, but not regularly tested and voted on; and some kinds, popularly known, and considerably cultivated, were thought unworthy a formal reprobation.

The next regular meeting was appointed to be held in the Court House in Hennepin, at 12 o'clock, on the second Wednesday, the 11th of August next, for the purpose of examining early or summer fruits.

It was, on motion,

Resolved, That for the purpose of extending our knowledge, and ascertaining the merits of different varieties, the specimens correctly named, should be obtained from different places abroad: Ordered, That the Secretary correspond with different Associations and individuals abroad, who may be engaged to furnish us packages of the principal varieties in their respective localities, and tender to them specimens of the products of our country, with such information as may be necessary for their correct appreciation.

Dr. John Pulsifer, Williamson Durley and Smiley Shepherd, were appointed a committee to select and prepare specimens of fruit for exchange. Adjourned.

SMILEY SHEPHERD, Sec'y.

BET SUGAR IN UTAH.—An English firm have taken out a full equipment of machinery for this manufacture to Utah.

Large quantities of seed had been sent previously. It is said that that country is well adapted to the growth of the beet.

April in Philadelphia.

THE weather for the month just ended, has been unusually cold; ice formed on ten mornings, and on two days only, the mercury rose above 60° at mid-day. Rain or snow fell on seventeen days—snow on five days, covering the ground six days in succession; and only five days were clear throughout. The average temperature from sunrise to 2 p. m. was 9° colder than the general average for April, as adduced from tables which extend back through a period of sixty-three years; and 1½° colder than that for any April, during the same time.

The forest-trees have not put forth their leaves; the grass has but just started, and our early spring flowers which often appear in (March,) have only within a few days ventured to unfold themselves and display their beauties.

Long experience and observation have shown, that taking one year with another, we have about the same amount of heat or cold during the year, and that if we have an unusually cold winter, as the past has been, the deficit of heat is pretty sure to be made up in the following seasons; consequently, it is very probable that the coming summer will be a hot one.—1816 was an exception to this rule; then, ice was formed in every month of the year.—*The Friend*, May 1st.

CORRECTION—On page 391, of the last number, at the close of an article headed *Western Wine and Western Policy*, the Editor intended to have expressed his hope that our law-makers would give us a *Bureau of Agriculture, protection* to our industry, and *improvement* to our navigation.

Notices.

NEW PUBLICATIONS.

THE PHILADELPHIA FLORIST; Vol. 1, No. 1. Philadelphia: May, 1852.

THIS is a new Horticultural journal and magazine of Horticulture, Botany, Agriculture, and the kindred sciences—edited by R. Robinson Scott, and conducted by a committee of practical Gardeners—monthly—with colored plates—at one dollar a year.

These gentlemen have stepped into the arena with good spirit, and promise to furnish a valuable medium of communication for the gardeners, and even the most humble cultivators of door-yards and window plants.

The number issued is illustrated by a handsome colored lithograph of the *Dicentra* (*Dielytra*) *spectabilis*, or Japan Dicentra. This is a beautiful species of a very curious and somewhat perplexing natural family, which has furnished a great deal of amusement to the botanists, who have been troubled to place them all in proper genera—from *Fumaria* down to *Dicentra*.

There are many articles in this number which promise well—and show, that indeed the practical men have taken an interest in the enterprise which should insure to Mr. Scott the success he seeks and deserves.

The leader, is an article upon the natural system of classification which is gaining favor, more and more, as it becomes better known and understood.

One thing I regret to find in its pages:—the conductors of this new enterprise appear to feel a degree of jealousy of some of their fraternity in the North and East, who have been of great service to the cause of Horticulture throughout the United States. They urge the necessity of a periodical for every few degrees of latitude, with a pertinacity that hardly corresponds with their claims of a free scope open to themselves, from Albany

and Boston to New Orleans. As to the West, it seems not to have entered into their calculations at all. It is true, that several copies of the Western Horticultural Review are subscribed for in Philadelphia, but it is also a fact, much regretted by myself, that few of the “practical gardeners” of that horticultural “city of flower-gardens,” and “deep lots,” have encouraged this work—would that more of them could be reached by the zephyr from the West!

The Florist is commended to the favorable notice of horticultural readers. If successful, which no one should doubt it will be, and which it deserves to be, it will resemble in its range of usefulness, that excellent periodical across the Atlantic, the *Cottage Gardener*.

Great allowance should be made for the difficulties attendant upon the issuing of a first number, which will no doubt be overcome, and enable the actors to avoid the orthographic or typographic errors hereafter.

THE KENTUCKY CULTIVATOR,

HAS made its debut before the world; it is an agricultural paper, recently established in the heart of a great agricultural state, and should therefore expect to meet with abundant encouragement and support.

The advent of this collaborator is hailed with great pleasure, as an evidence of the right kind of spirit dawning upon the Kentucky Farmers.

The Kentucky Cultivator is a quarto of sixteen pages, which is to be issued every month, by J. ATKINSON, the enterprising editor of the *Cynthiana News*, a paper which has embraced different opportunities to make honorable mention of the Western Horticultural Review.

The leading article in this number is an essay upon soils, by Prof. PETER, of Lexington, whose able pen is brought into requisition for the benefit of the agriculturists of his state—this may be called "Applied Science"—it is right that the farmer, as well as others, should reap the benefit of professional knowledge.

It is understood that Mr. ATKINSON has issued a very large edition, 3,000 copies, and has distributed them freely, so that all may have an opportunity to see for themselves, and the News says, subscribers are sending in their names very freely.

One thing will astonish Western Horticulturists,—MR. ATKINSON has been obliged to look to the East for his Strawberry article!! and it does not convey correct information.

Terms—A dollar a year for one copy, three dollars for four copies, and five dollars for ten copies.

Trees Dead.

WE now may realize the effects of the severe winter. And it is truly wonderful that so many of the plants introduced from southern latitudes have escaped, while some of our own natives have suffered.

The Ailantus and Pawlownia, which have been supposed to be somewhat tender, have resisted the cold perfectly; the latter, having ripened its wood better than ever before, was found perfectly safe to the terminal bud—though, as the blossom-buds have all been destroyed, we shall miss their fine bloom. Of this tree it may be remarked, *en passant*, that it has proved itself admirably adapted to our climate in another respect;—during the excessive drought of last summer, while its cousin and rival, the Catalpa, was drooping its leaves, and turning yellow and withered, the Pawlownia continued to hold up its broad leaves.

The Sycamore-trees are evidently much

injured by the winter, and are clothing themselves very irregularly. The Weeping-Willow, (*Salix babylonica*), is much cut at the ends of the limbs and twigs, but the Broussonettia, or Paper-Mulberry, is almost entirely killed.

The Olentangy Gazette, Delaware, Ohio, of May 15, says, "Peaches are not only killed, but the trees in most instances injured beyond hope of recovery. We noticed, during a trip to Cleveland the present week, that the peach-trees in that city and for some thirty miles back from the Lake were in bloom, and promise a fine crop."

Friend CLARKSON, of the American, previously quoted, asks now whether the Apple-trees may not recover? Surely it is very questionable whether any so badly injured as his can ever resume a healthy state.

THE FIRST STRAWBERRIES—Made their appearance at Louderback's, as usual. On the 14th of May and subsequent days, these tempting fruits were seen in the windows of our energetic caterer, who paid from sixty cents to a dollar per quart for the first. The crop does not promise to be abundant—many plants have no blossoms.

Fruit in Kentucky.

I find, on examination, that the larger portion of my pear and cherry blossoms are killed. Most of the varieties of apples are safe. The quince trees are nearly all killed *to the ground*, and the peach-trees are badly injured.

I am now testing Mr. Longworth's theory [Duster's] respecting the importance of the aid of insects in impregnating strawberries. I am covering several varieties with bell-glasses during the period of flowering. I will report the result. [Do so.]

H. P. BYRAM.

LOUISVILLE, KY., April 27, 1852.

[Mr. Byram has since told me that the plants did not set a fruit under the glasses, but thought a fairer method would be to use wire covers, as the glasses were too hot.—Ed.]

METEOROLOGICAL TABLE.

CINCINNATI, APRIL, 1852.

THERMOM.		WEATHER.			RAIN.	WINDS.	
Date.	Minim.	Maxim.	Sunrise.	Noon.		Sunset.	
1	44	59	clear	clear	clear	1	Light S W; brisk S W; high S W; light S W.
2	34	51	do.	do.	do.	2	Light W, brisk W; light N W
3	38	55	do.	do.	do.	3	Light N E.
4	39	42	rain	rain	rain	4	Light N E and N.
5	41	57	do.	variable ..	do.	5	Light N E, calm; brisk S W; light S W; brisk W
6	37	50	cloudy	clear	clear	6	Light W, brisk N W; light N W
7	36	58	clear	variable ..	cloudy	7	Calm; light S and S E.
8	45	49	rain	cloudy	variable ..	8	Calm, light N W.
9	37	55	clear	clear	clear	9	Light W, brisk N W; light N W.
10	37	57	do.	variable ..	cloudy	10	Calm, light S E.
11	51	66	rain	do.	clear	11	Calm, light W, calm.
12	45	68	fog, clear ..	clear	cloudy	12	Calm, light S and S W; calm.
13	47	70	clear	do.	clear	13	Calm, light N, variable; S.
14	52	60	rain	rain	rain	14	Light S E, light N.
15	42	63	clear	clear	clear	15	Light N W, calm at night.
16	43	67	do.	do.	rain	16	Light S and S E.
17	44	64	variable	do.	clear	17	Light S, light N.
18	48	63	clear	do.	rain, var. ..	18	Light N W, calm at night.
19	47	62	variable	do.	cloudy	19	Light N, light N W.
20	47	49	rain	rain	rain	20	Light N W, brisk N W.
21	44	54	cloudy	drizzle	variable ..	21	Light N W
22	49	55	rain	variable ..	do.	22	Light S W and W; N W; brisk N W.
23	39	61	clear	clear	clear	23	Light N W, calm at eve.
24	48	61	cloudy	cloudy	var., rain ..	24	Calm, light N E and E; calm.
25	54	78	do.	clear	do.	25	Calm, light S, brisk S; calm.
26	60	77	clear	variable ..	cloudy	26	Calm; light S S W and W.
27	42	61	do.	clear	clear	27	Light N W; calm at eve.
28	49	67	do.	do.	do.	28	Light S W.
29	58	74	cloudy	do.	variable ..	29	Light S and S W; light S E; calm. Lilac blooms.
30	62	86	clear	do.	hail & rain ..	30	Light S; brisk S W; high S; light S. Thunder.

REMARKS.

Rain fell on thirteen days, yet there were but three days in which the sun was not visible at some period in the day.

Light winds and calms prevailed to a remarkable extent; high winds but twice, and for a short time only; no storm in the month.

The hail on the 30th was of extraordinary size, but not driven with sufficient force to break the windows in the city. Great damage has been sustained from the breaking of the glass of green-houses in the vicinity. It passed over in a few minutes.

JOHN LEA.

We take from a letter written by Mr. Moore, proprietor of Trenton Falls, and a practical horticulturist, to a kind friend of ours in this city, the following extracts; which will give our readers some idea of what winter and spring are in latitude 43°, central New York. The date is March 28.

"DEAR SIR,—The spring, thus far, has been cold, with much snow on the ground.

Our winter has been severe and long, with steady sleighing since the 18th of November—four and a half months to this date. The blossom-buds of our finest cherries are three-quarters killed by the severity of the winter—several varieties of the plum-trees have eight inches of their *new wood* winter-killed, and also a *few* pear-trees. The coldest day of the winter was the 27th of December, (24° below zero;) on the 20th of January the mercury stood 21° below 0."

METEOROLOGICAL RECORD FOR THE YEAR 1851.

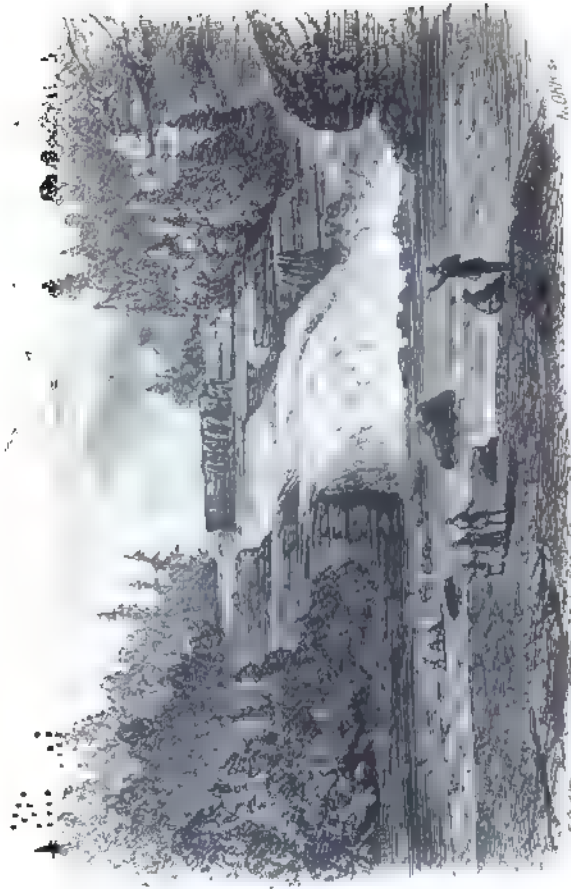
Range of Thermometer during the Year 1851, according to Observations made by B. WARD, in Jo Davies County, Illinois.

Date	JANUARY.				FEBR'Y.				MARCH.				APRIL.				MAY.				JUNE.				JULY.				AUGUST.				SEPT'R				OCT'R.				NOVEM'R.				DECEMBER.			
	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean	Sunrise	Noon	Sunset	Mean								
1	12	14	13,3	14	14	22	22	19,3	22	34	24	26,6	30	60	46	45,3	18	33	28	26,3	54	64	55	57,6	50	70	60	60,0	60	78	5	67,6	60	84	78	74,0	50	74	64	62,6	42	53	42	45,6	20	33	29	27,3
2	09	24	20,0	04	24	23	17,0	06	20	12	12,6	26	36	38	34	36,0	26	44	36	35,3	48	66	55	56,3	60	75	65	66,6	64	82	6	70,6	70	88	75	77,6	50	84	50	54,6	35	41	32	38,0	20	20	18	19,3
3	12	18	15,6	16	34	33	27,6	00	29	30	19,6	32	56	52	45,3	32	50	12	41,3	48	58	47	51,0	52	68	58	59,3	56	58	5	56,6	68	88	72	76,0	36	56	46	46,0	20	36	26	27,3	18	24	20	20,6	
4	14	24	18,6	24	36	34	31,3	26	22	19	22,3	28	42	32	26	31,8	28	42	38	36,0	46	60	55	53,6	55	72	61	62,6	52	53	5	57,6	68	84	75	75,6	32	53	48	45,0	25	34	26	28,3	19	26	18	20,6
5	18	34	24,6	26	36	28	30,0	13	24	15	18,3	30	46	34	26	23,3	30	46	34	36,6	52	72	56	60,0	58	78	64	66,6	54	80	5	58,3	68	72	74	71,3	42	66	55	54,3	24	28	25	25,6	18	30	30	28,0
6	24	34	26,0	10	28	28	22,0	08	20	20	16,0	32	56	47	45,0	32	56	47	45,0	60	72	62	65,6	62	86	74	74,0	60	76	5	58,3	67	80	74	73,6	47	66	56	65,3	13	34	32	26,3	32	35	35	34,0	
7	24	2	25,3	20	30	28	26,0	14	34	28	25,3	42	76	60	59,3	42	76	60	59,3	58	75	64	65,6	64	80	70	71,3	60	74	5	58,3	72	85	74	77,0	49	70	54	57,6	30	41	34	35,0	40	50	49	48,3	
8	28	28	26,6	23	46	38	35,6	12	21	20	17,6	50	64	59	57,6	50	64	59	57,6	48	60	55	54,3	68	84	75	75,6	58	80	5	58,3	72	84	74	76,6	46	70	64	60,0	20	33	26	28,3	18	37	20	23,0	
9	18	24	22,6	06	20	18	14,6	24	28	26	26,0	30	59	54	47,6	45	74	64	61,0	48	64	55	55,6	68	77	74	73,0	52	64	5	57,2	72	85	74	77,0	54	72	64	63,3	20	31	24	25,0	10	20	20	18,6	
10	24	28	25,3	06	18	16	13,3	13	44	36	31,0	28	39	36	34,3	60	73	73	68,6	50	73	61	61,3	62	77	64	67,6	60	75	5	56,6	68	84	73	75,0	58	65	54	59,0	16	28	20	21,3	21	34	29	28,0	
11	19	25	22,0	06	10	10	08,6	30	40	34	34,6	28	38	32	33,0	62	76	70	69,3	47	52	54	51,0	60	78	72	70,0	66	84	5	57,3	70	85	74	76,3	42	52	48	48,3	17	30	28	25,0	20	26	26	24,0	
12	16	26	22,0	16	30	34	28,6	26	46	45	39,0	26	66	59	61,6	60	66	59	61,6	50	70	60	60,0	70	86	70	75,3	66	82	5	57,0	70	85	74	76,3	40	46	46	44,0	28	30	32	30,0	02	24	00	02,0	
13	14	22	20,0	32	31	33	32,0	32	56	51	46,3	32	66	58	48,6	42	6	50	50,6	48	65	55	54,3	74	90	76	80,0	58	7	5	51,6	50	60	50	53,3	38	49	40	42,3	28	33	28	29,6	10	08	01	06,3	
14	34	42	37,6	33	36	36	35,0	36	59	50	48,3	42	6	47	38,3	42	6	50	50,6	48	65	55	54,3	74	90	76	80,0	58	7	5	51,6	50	60	50	53,3	38	49	40	42,3	28	33	28	29,6	-12	00	00	-4,0	
15	26	33	29,6	06	10	06	07,3	38	54	50	47,3	38	54	50	47,3	36	46	44	40,6	44	70	61	59,3	50	68	58	61,0	50	7	5	51,6	50	60	50	53,3	38	49	40	42,3	28	33	28	29,6	10	08	01	06,3	
16	27	06	11,3	-6	06	10	03,3	33	42	40	38,3	32	46	43	40,6	32	46	43	40,6	54	70	66	63,3	50	68	58	61,0	50	7	5	51,6	50	60	50	53,3	38	49	40	42,3	28	33	28	29,6	-28	-10	-17	-17,6	
17	-18	-08	-11,3	20	28	26	24,6	28	44	40	37,3	46	60	50	52,0	46	60	50	52,0	48	65	55	54,5	66	82	70	72,6	55	4	5	57,6	48	66	52	55,3	42	54	46	47,3	18	34	28	28,6	-26	-16	-16	-19,0	
18	-20	-6	-5,3	04	26	24	18,0	26	42	32	33,3	46	60	55	52,0	46	60	55	52,0	58	69	70	65,3	60	66	58	61,0	50	7	5	51,6	50	60	50	53,3	38	49	40	42,3	28	33	28	29,6	-26	-5	-2	-11,0	
19	16	20	22,6	28	42	34	34,6	28	43	40	37,0	28	43	40	37,0	36	18	45	43,3	64	90	65	69,6	54	69	58	60,3	56	73	5	54,3	62	76	60	66,0	33	52	46	43,6	25	36	38	33,0	14	20	08	14,0	
20	-4	12	08,6	28	32	28	29,3	18	40	30	29,3	28	36	34	32,0	46	60	54	53,3	60	76	66	67,3	64	90	64	64,6	56	73	5	54,3	62	76	60	66,0	33	52	46	43,6	25	36	38	33,0	14	20	08	14,0	
21	26	37	32,0	20	28	26	24,6	20	40	32	30,6	48	54	54	52,0	48	54	54	52,0	56	70	64	63,3	65	80	68	71,0	62	78	5	58,3	59	64	57	60,0	30	42	37	36,6	20	29	27	25,3	08	12	04	02,3	
22	16	36	26,6	26	38	40	34,6	32	34	26	30,6	54	75	49	59,3	54	75	49	59,3	58	68	60	62,0	64	78	65	68,0	60	74	5	58,3	56	65	65	62,0	23	35	33	30,3	16	27	25	22,6	-8	-2	-6	15,3	
23	18	40	31,3	40	46	38	41,3	20	44	40	34,6	46	66	56	56,0	50	68	60	59,3	69	65	68	64,3	58	75	64	66,6	54	80	5	58,3	59	64	57	60,0	30	42	37	36,6	20	29	27	25,3	08	12	04	02,3	
24	06	24	19,3	26	36	28	30,0	32	58	52	47,3	46	68	58	57,3	36	56	50	47,3	60	78	68	68,6	62	84	74	73,3	68	82	5	57,3	40	56	46	47,3	39	53	46	46,0	16	34	26	25,3	16	34	26	25,3	
25	26	36	33,6	26	40	39	35,0	38	67	56	53,6	52	62	60	58,0	62	85	70	72,3	62	85	70	72,3	68	90	75	77,6	68	72	5	56,6	40	59	54	51,0	29	35	29	31,0	20	26	20	22,0	10	10	04	08,0	
26	20	32	26,6	39	40	20	33,0	40	64	58	54,0	44	52	48	48,0	64	88	74	75,3	72	90	76	79,3	52	54	5	55,3	54	56	43	51,0	12	24	28	21,6	21	32	27	26,6	00	20	10	10,0					
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MONTHLY MEAN—Jan. 17° 594; Feb. 34° 246; March. 34° 491; April, 40° 697; May, 53° 985; June, 61° 985; July, 70° 082; Aug. 64° 851; Sept. 63° 609; Oct. 45° 673; Nov. 27° 585; Dec. 15° 000.

MEAN ANNUAL TEMPERATURE—43° 284.

Univ. of
California



TRENTON FALLS, N. Y. (High Fall)

Morris & Seigrist, Pro.



VOL. II.

JULY, 1852.

No. 10.

Miscellaneous.

AGRICULTURAL BUREAU.

HIS subject has deservedly claimed much attention from the wisest and best men of our country, for many years past, but so far with very little result to the great interests concerned. Why is it that our patriotic legislators, who leave their homes and hearths, as well as their business, in the cause of their country, and go to Washington to act for the masses, whose agents (servants) they are, and whose commands they should execute, why is it, that, in the face of repeated recommendations given by the wisest and best of Presidents, from the beloved Washington down to the present incumbent, they the representatives of the people should have effected so little toward the organization of essential aid to the progress of the vast productive or creative art of agriculture?

Fortunately, a bill has at length been introduced, and some men dare to step forward in its support—among them, Mr. Doty, of Wisconsin, and Soulé, of Louisiana, have already been noticed in these pages as earnest friends of the bill. Mr. Newton has recently

made a fine speech upon the subject, from which the following extracts have been taken. They contain arguments worth preserving.

New York has a state society, and from seventy to eighty county societies. Pennsylvania has from twelve to twenty county societies, and many grouped together. Ohio has a state society, and seventy county societies. Massachusetts has twelve societies, and in many of these several counties together. Michigan has twenty county societies. Indiana, a state society. Kentucky has five county societies. Georgia, a state society, and fifteen county societies. South Carolina has six county societies. Virginia has a state society, and three county societies. Maryland, a state society, and four county societies. Vermont, a state society, and four county societies, and was the first state to ask us to establish a national board. New Hampshire, a state society, and eight or nine county societies, and has asked Congress to establish a board. Connecticut, a number of county societies. Rhode Island has passed resolutions asking Congress to establish a board. Maine has six county societies. Iowa, a state society, and six or eight county societies. Wisconsin, a state society. Illinois, three county societies. Tennessee has some county societies, and two years since unanimously recommended a national board. Florida has passed

a resolution for a national board. Louisiana, in 1848, passed a law for a bureau.

President Fillmore, in full view of the increasing agricultural interests of the country, and with great practical wisdom, on the 2d day of December, 1850, made the following recommendation :

"More than three-fourths of our population are engaged in the cultivation of the soil. The commercial, manufacturing, and navigating interests are all, to a great extent, dependent on the agricultural. It is, therefore, the most important interest of the nation, and has a just claim to the fostering care and protection of the government, so far as they can be extended consistently with the provisions of the constitution. As this can not be done by the ordinary modes of legislation, I respectfully recommend the establishment of an agricultural bureau, to be charged with the duty of giving to this leading branch of American industry the encouragement which it so well deserves. In view of the immense mineral resources of our country, provision should also be made for the employment of a competent mineralogist and chemist, who should be required, under the direction of the head of the bureau, to collect specimens of the various minerals of our country, and to ascertain, by careful analysis, their respective elements and properties, and their adaptation to useful purposes. He should also be required to examine and report upon the qualities of different soils, and the manures best calculated to improve their productiveness. By publishing the results of such experiments, with suitable explanations, and by the collection and distribution of rare seeds and plants, with instructions as to the best system of cultivation, much may be done to promote this great national interest."

Upon this message, last year, in the house, no bill was reported, or action had. In the senate a bill was reported, but no action.

Secretaries Ewing and Stuart, in their annual reports, both strongly recommend a board.

At this session, President Fillmore again makes the following recommendation :

"Agriculture may justly be regarded as the great interest of our people. Four-fifths of our active population are employed in the cultivation of the soil, and the expansion of our settlements over new territory is daily adding to the number of those engaged in

that vocation. Justice and sound policy, therefore, alike require that the government should use all the means authorized by the constitution to promote the interests and welfare of that important class of our fellow-citizens. And yet it is a singular fact, that while the manufacturing and commercial interests have engaged the attention of congress during a large portion of every session, and our statutes abound in provisions for their protection and encouragement, little has yet been done directly for the advancement of agriculture. It is time that this reproach to our legislation should be removed; and I sincerely hope that the present congress will not close their labors without adopting efficient means to supply the omissions of those who have preceded them.

"An agricultural bureau, charged with the duty of collecting and disseminating correct information as to the best modes of cultivation, and the most effectual means of preserving and restoring the fertility of the soil, and of procuring and distributing seeds and plants and other vegetable productions, with instructions in regard to the soil, climate, and treatment best adapted to their growth, could not fail to be, in the language of Washington, in his last annual message to congress, a 'very cheap instrument of immense national benefit.'"

And is it not due to his official relation, after his repeated recommendation, that we act either for or against it?—and which way? is the question.

Gen. Washington, Mr. Jefferson, Mr. Madison, Mr. Monroe, and Mr. Adams, for a period of thirty-six years consecutively, all recommended an improvement of agriculture, or national schools, and the same principles and powers are involved in each of their recommendations, and no one of the subsequent Presidents advising against it; Mr. Taylor and Mr. Fillmore strongly recommending, and their secretaries; the resolutions of legislatures, petitions of agricultural societies and of the people, and the interest of eighteen millions of our inhabitants, yea, of the whole, I ask, if all this combined is entitled to any consideration? — It has received but very little. But I am told there is a Patent Office, and the farmers are abundantly enlightened with the crumbs that fall from its table. The Patent Office, until 1831, during General Jackson's administration, when he

called Mr. Ellsworth to it, was a burlesque, and is now, upon farming, compared with the wants of this great nation. Mr. Ellsworth was a practical farmer, but he had all to do, and nothing to do with. He was the first in that office to give any attention to agriculture. But the first appropriation for that object was in 1839, \$1,000, for collecting agricultural statistics; and \$29,000 in seventy-five years. The cost of printing is not included. What can this small pittance do for this great nation? Scarcely enough in any one year to defray the ordinary expenses of correspondence.

Where is our agricultural department? Pent up in the cellar of the Patent Office, and can not be found at midday without a candle; and when found, a single clerk, struggling to get up the report. When it is up and out, there are but four hundred volumes for each congressional district of one hundred thousand population, and that a reading people; and there is more call for this document than all others of a public character, and fast gaining in reputation from editors over the Union and the public generally, inadequate as it is.

There is no country where the mind is so inquisitive and information so generally desired and possessed as in America. Travel over the whole world and return, and the truth is seen and felt more palpably. To us the masses of the world are looking for improvement, physically and morally. In the United States there are but about thirty agricultural periodicals published, and there are five hundred thousand copies taken and read by the people. There are agricultural journals in the state of New York that have six times greater circulation than any single paper of the kind in Europe. This only shows how great is the thirst we should assist in gratifying. In America there is not an agricultural school aided or patronized by the government, and in fact, it may be said, there is none at all. Some are just beginning to struggle for life, but the faint, feeble feeling of the general government infuses itself into every part of its great family, and paralyzes the whole body. There is not what may be regarded as a text book in any branch of agriculture or rural economy in America.

Compare what America as a nation has done with what has been done by other nations. I can but glance at it. Russia has in all

sixty-eight schools and colleges. She has an agricultural institution with forty college buildings, occupying three thousand acres of land, and attended by several thousand students. The Agricultural Society of St. Petersburg was established by Queen Catharine. There are under the patronage of the French government seventy school farms, besides five first-class colleges, in which professors are employed to lecture on botany, zoology, chemistry, agriculture, and the treatment of diseases in cattle, on the culture of woods, forests, etc. These are supported throughout the country. National establishments for the improvement of breeds of stock and colleges for the education of veterinary surgeons, and investigating the uses of all discoveries contemplated for agricultural improvement. The government expend 754,200 francs a year, for instruction, in three veterinary schools; 2,731,468 francs for instruction in agriculture; 700,000 francs for encouragement in agriculture; and 1,776,400 francs for improvement in the breeds of horses and science connected with it alone.

In Belgium great attention is paid to the subject. There are an hundred agricultural schools or colleges established by the government, a high school of veterinary surgery. The science of agriculture is the most fashionable in the kingdom. They have their palaces furnished more or less with rare specimens of the products of the land, and are farmed like a garden. These facts I know, having traveled over considerable part of that country. In Saxony they have five schools; in Bavaria, thirty-five; in Wurtemberg, seven; in Austria, thirty-three; in Prussia, thirty-two; in Italy, two; in Scotland, two; in Ireland, sixty-three: the one at Glasnevin, near Dublin, I visited. It now consists of one hundred and twenty-eight acres of good land, and convenient buildings, and they are about to add to their farm, and increase their buildings, so as to accommodate one hundred or more students. I viewed the farm, and the farming, buildings, etc.; and it is carried on very successfully. These schools are doing more for Ireland than any other attention the government is giving them. They have colleges and agricultural schools in England, sustained by the government—some four or five with large farms attached to them—where all the sciences connected with the general business are taught with great per-

fection, and millions of money each year invested in the general science of agriculture by the nation. It is an investment and not an expenditure. Other countries are engaged in the same business, but I can not go further into detail. Sufficient is said to draw a parallel between their views and ours. Abroad they invest millions each year, in a country not larger than an average of our states. Here, in all our country, for seventy-five years, for the general object, we have expended \$29,000.!!!

I come now to consider the provisions of the bill proposed by your committee. We present what we supposed could be passed, rather than what the capacity and wants of the country in all respects required. It is in the most unexceptionable shape we could devise and mature.

Here is a bill as simple and plain as the elements of our government, as express and explicit as language can make it in all its details, and embracing an outlay of \$10,350. The general policy of the nation appears to be agricultural.

There is a general increased attention to agriculture within the last few years over the world. More has been done in Europe in six years than had been in twenty before to improve it; more in America in five years past than in forty-five before. Since the present session began, four states have passed resolutions, almost unanimous, as I am informed, asking for this organization—Florida, New Hampshire, Rhode Island, and Indiana.

The present proposition is not a new principle, but only an improvement upon our present policy. Last year \$5,500 were appropriated: now we only ask the appropriation to be distributed by an accredited agent. Every member of this house, who has or will bestow any attention on the manner in which the business is now done, can but see that some improvement is necessary.

Nations stand to states and individuals as parents do to their offspring; and with us this relation is exceedingly forcible, numerous and endearing; for our children are increasing as the sands of the sea, and seem to be covering the whole earth. Already their cries for aid, protection, and instruction reach us from the Rocky Mountains. This relation imposes reciprocal duties and obligations from one to the other. From us to our offspring, aid, protection, and instruction; and

from them to us, fidelity. And may this relation, through all time, be preserved, cherished, and cemented. The children, yea, the children of this great agricultural family ask, yea, importune the parent, the nation, for a head, for a fountain, to which they can look for instruction, science, and wisdom, to guide them in their infancy, and to sustain them in old age. Do not repel us with the negative—that the family is numerous, the wants many, and the expenses great. We reply, you begat us, and bare us; you have scattered us over the face of the earth; to you alone can we look, and to you will we cling. Grant the prayer, and the protection is visible, and the fidelity enduring. But I am told agriculture should be free, unprotected, untaught. These terms free, freedom, and free trade, in their latitudinous and indiscriminate use, are as unmeaning and suicidal as it would be for a nation to let loose and unbridle all the passions and propensities of her subjects, and the reins of her government; or for a parent to say to his child, at its birth, go, be free to your maturity; or for the agriculturist to dig out the bowels of the earth and return nothing to it, and turn it off because it is worn out. No, this will never do. The agriculturist asks for nothing that interferes with the general well-digested views of any member of this body. We only ask for the scientific influence and power of the government, to aid and direct all our various avenues of freedom and enterprise away from the shoals and quicksands that beset our path, without chart or compass. We propose only to furnish at the seat of government, where all our nation centers, where all other nations center to transact business, a scientific organ or agent of our own creation, to analyze our soil, and accumulate information in the manner we propose, and send it over the country broad-cast, in the shape of reports, for the benefit and improvement of the masses.

But I am told by some honorable members of our committee, for whom I entertain a high regard, that the plan is unconstitutional. What! Is it to be said that America is the largest landholder in the world, and yet the poorest farmer? and that there is no remedy, no cure; for that she has engrafted into her own organic law, seeds, the fruit of which will produce her own decay and destruction. No.—It is a mistake: it can not be.

I have already said, by this plan we propose nothing new, only an improvement upon our adopted policy. We have the same power to do this, that we have to establish the navy, war, and other departments, and bureaus, to transact our business—the same power as to employ hands constantly to improve and ornament the public grounds at Washington. The science we propose to accumulate and diffuse, by this agency, is as directly applicable to the government and its prosperity and welfare as it is to individuals and their welfare. Your coasts, and geological surveys, and a vast variety of others, are of the same character and family, except that those are more local in their effects, and this more general, and therefore less objectionable. To apply this construction to the great agricultural interest of the country, when it is not extended to any other interest besides, would be strange indeed. But the constitution provides that congress may do whatever is necessary for the general welfare of the United States. This question resolves itself into one of fact, and not of law. Suppose it became necessary to cut a ditch, as an outlet to a million acres of swamp land, belonging to the government, now worth nothing, but by it worth five dollars an acre, could it not be done? We have power to make all needful rules and regulations respect-

ing the territory and other property of the United States. This bureau relates directly to the elements of our soil and its improvement, as does the ditch, or the ornamental trees and shrubs of your public grounds.

America! toward whom a kind Providence hath been more merciful than to all the sons of men before thee—thou who art, and art to be the teacher of all the nations of the earth—and whose sons are to be the citizens of the whole inhabitable globe—whose united wisdom is the admiration of the world—whose united strength, the giant of the world—do not scorn the earth that gave thee this rich heritage; do not, I beseech you, add another negative to the long catalogue that hath stained each bright page of our history—do not longer disregard the recorded counsel of our departed yet present counselor. Do not again smite the earth, lest she cry out, “Why hast thou smitten me these seventy times? Am I not thy servant that hath fed and clothed thee ever since I was thine? Do not permit the stranger to gaze upon your greatness and my deformity.” Awake from the long night of slumber, and strive for our future prosperity. And of the recorder, who hath recorded this bright page of our past history, may I inquire, “What of the future?” I fear the response, and will withdraw the interrogatory.

AGRICULTURAL EDUCATION.

THE NECESSITY FOR A PROPER SYSTEM OF INSTRUCTION IN AGRICULTURAL SCIENCE.

Analytical Laboratory, Yale College, }
New Haven, Conn., Jan. 31, 1851. }

I do not propose to take up the above subject in its broadest sense, but to confine myself to a comparatively limited field. I shall say little at present as to the want, felt more and more every day by an increasing majority among our farmers, of educational institutions especially adapted to their wants, but would call attention to a point which has been overlooked by many in their zealous advocacy of the general cause. It seems to me, that a chief reason for the annual failure of so many plans bearing upon the educational interests of the farmer, may be found in a real scarcity which exists, of men competent to take charge of the proposed institutions. To those who have never reflected

upon this subject, my assertion may seem a strong one, when I say that if any six states of the Union were within the present year to make provisions for the establishment of state agricultural schools, or colleges, within their respective borders,—were to endow them largely in every department, to furnish them with libraries, implements, museums, apparatus, buildings, and lands,—they could not find on this continent the proper corps of professors and teachers to fill them. I will even go further than this, and say that if in your own state of New York a large institution were planned out, and all proper departments of instruction pecuniarily provided for, it would be a difficult matter to fill them satisfactorily with thoroughly competent men. Enough of those who would gladly accept such appoint-

ments as might be offered, could doubtless be found; but the question is, would they be just such instructors as the farmer requires?

There are certain points relative to which he demands information from various branches of science, and this information to be of value must be correct. Mistakes, blunders, misconceptions from the heads of a great state school, sent forth under authority, and promulgated rapidly, would cause infinitely greater mischief than our going without a school altogether for some years to come.—For such reasons, extreme caution should be used in the selection of instructors for any large or influential school; and for such reasons, among many others which might be adduced, I have ventured to say as above, that we really have not in the country the men that are needed.

If the farmers of any state were to select persons to impart instruction, or to serve as examples, in any practical department of their business, would they be contented with mere professions, or mere hearsay reports, of their success or skill? Above all, would they not be disposed to question the expertness of one who professed to have made himself familiar with every department of mere mechanical labor, in the lapse of a very short time. If teaching the use of the plow in the best possible manner, and under every circumstance, were for instance the object, would they be content with a man who could only show the experience of one or two years in the use of that implement? By no means; they would say—we can do as well as he can ourselves, and do not need such instruction as this; we want a master of the subject, one who has studied it thoroughly in every department of practice, and has brought an intelligent mind to bear upon all the variations of use and construction in different districts. With a man of less acquirement than these in any practical matter, no community of farmers would be satisfied; they would not receive his advice with respect, and would not consider his opinion as worth much more than that of any other intelligent individual.

I think all will agree with me, that these views are correct with regard to subjects of pure practice, and that most farmers would act in accordance with them. Now I ask, why do not the same views obtain with regard to teaching of science? We see men who are in all ordinary circumstances, shrewd and

sagacious, swallowing every fable that come to them in a scientific guise.

The merest charlatan may take up his books and mysterious looking apparatus; and having familiarized himself with a few hard names, is able to persuade the mass of those who meet him that he knows everything within, upon, and above the earth, that explains the action of nature's laws. Allow me to say a few words in direct reference to the falsity and even absurdity of such pretensions.

In speaking of the mechanical operations of husbandry, such as plowing, I have said that as a general fact, entire proficiency could not be attained within one or even two seasons; a long course of experience was necessary. Is it then so much easier to read the laws of nature, or rather of God, which bear upon those wonderful structures of plants and animals that we see about us? In the growth of the humblest weed that flourishes by the wayside, a series of changes, transformations, and metamorphoses goes on, which as yet the highest effort of the human intellect has failed to fully explain and elucidate.

To produce the feeble stem which we crush under our feet in passing, the powers of earth, air and water, have joined with those of the far distant sun, and during its short life, it has been an example of a complication of most wonderful laws, imposed by the Almighty Maker of all. He has seen fit in his wisdom to ordain, that every step in knowledge must be won by toil and exertion, and thus it is in the present case; we are only able to slowly unfold the wonders that are occurring on every side, during the every-day experience of life. The field, too, widens as we advance, until we find that every step has its consequence, every breath of air its appointed mission, every drop of dew its office to perform; we discover that we are in the midst of cause and results, of which our knowledge is quite limited; that the threads we have seized only guide us to new and more difficult labyrinths of investigation. What we know dwindles away, when we compare it with the sum of that which we desire to know.

The true student of natural science, then,—the true follower of patient, earnest, truth-seeking research,—grows not bolder, but more modest, as he wins his way; he knows that his highest reach of knowledge is, and ever must be limited; he feels each day so

many wants yet unsatisfied, sees so many problems yet partially solved, or totally inexplicable, that he leans constantly toward caution, rather than rashness, and is disposed to qualify his strongest convictions on all theoretical points.

Of those who are not thus impressed by the advance of years, and the increase of experience, it must be said that their opinions can not be entitled to great confidence. One who can promptly and confidently settle every question proposed, who has no doubt as to his own ability of decision on the most intricate and complicated problems, must be either a man who has advanced very far beyond the range of the other votaries of science in his own day, or one who is not able to appreciate the difficulties which surround him, and who is not, therefore, a safe guide. There is a third supposition in the above case, which is to consider such a man designing and unscrupulous; but this is, let us hope, the rare alternative.

I might go on at great length, but these hints will, I think, be sufficient to show that farmers must not only have instruction, but that they must have it of the right character. It is obvious that every person who comes along, claiming to be highly scientific, should not be taken upon trust, but should be tested in some way, as to the soundness of his pretensions. Let the evidence of other scientific men be brought in, and let satisfactory proofs be required of his ability to do what he professes. This is not said with a view of recommending any particular person or persons, as to be followed implicitly, but with the desire of arousing more caution than has hitherto been exercised in these matters. "All is not gold that glitters," and all is not true science, that is high sounding.

It is for such reasons that I have said—we have not at present a sufficient number of the proper men to found and continue our agricultural schools, in a manner that will satisfy the expectations of the community. The training of such men, then, is a work of great importance, and even urgency. It is a work that can not be accomplished at short notice; one or two years will not do it; we want those who have had extensive experience, who have availed themselves of every advantage for the acquirement of reliable knowledge, and who have learned to know what the necessities of the farmer are.

Among the wants of the farmer, I consider this lack of first-rate instructors one of the most pressing and urgent; it is useless for him to establish schools, unless he can find proper teachers, and he ought not to be driven, by their premature establishment, into any dependence on those who can only mislead and disappoint him.

Here is a most promising field for enterprise and energy; here are many openings that within a few years must be filled. Those who now enter on the study of science as applied to agriculture, will find their acquisitions in immediate demand. If but fifty or one hundred intelligent young men would, for the coming few years, devote their efforts to the acquisition of the various branches of science connected with agriculture, they would control the whole field, and be able to sweep away the glaring errors which are now so prevalent. We could then commence with schools in all directions; quackery and ignorance would decrease, and a great and rapid advance would be visible in every quarter.

Let us, then, while we are agitating the subject of instruction, not forget to urge upon our young men of ability, the advantages of fitting themselves as instructors;—there can not be too many of them for years to come, and they, therefore, need not fear that the profession will be overstocked.

Yours, respectfully,

JOHN P. NORTON.

Albany Cultivator.

Useful Invention.—A patent has been taken out by Mr. Sewall, of New London, Conn. for a method of constructing window sashes, and fixing the glass therein without putty. Heretofore, when a pane of glass was broken, a glazier should be immediately summoned who in removing the hard putty, frequently damaged the properties of the sash; but, by this new arrangement, any one can remove the broken pane of glass, and replace it with a whole one, by merely turning a small screw inside the sash, which, when unclosed, detaches the bars of the sash which hold the glass against small strips of India rubber. As a sash constructed on this plan is subject to no chiselling by the putty knife, it may remain a permanent fixture for years, and may be more highly ornamented. His invention will prove highly advantageous in the construction of hot-houses, light-houses. etc.—*Exch.*

TRENTON FALLS.

THIS wild and beautiful waterfall has attracted much attention, and is a favorite resort of those who seek and can appreciate the beautiful and natural in scenery. N. P.

WILLIS has edited a beautiful Guide Book, descriptive of the place, from which the reader shall be favored with extracts in the present article.

Willis says it is "the most *enjoyably beautiful* spot, among the resorts of romantic scenery in our country. To most lovers of nature who have visited it, the remembrance of its loveliness has become the bright spot to which dream and revery oftenest return. It seems to be curiously adapted to enjoy; being, somehow, not only the *kind*, but the *size* of a place which the *measurable arms* of a mortal heart can enfold in its embrace. . . . Trenton Falls is the place, of all others, where it is a luxury to *stay*—which one oftenest revisits, and which one most commends strangers to be sure to see.

The village of Trenton, a few miles north of Utica, was formerly known as OLDENBARNEVELD, thus named by Col. Boone, one of the first settlers, in honor of an officer of that name, who was beheaded in the 17th century, for his being too favorable to religious toleration, and a friend to peace. The Indian appellation of the Falls—"Kauey-a-hoo-ra," or *Leaping Water*—is only remembered by a few.

Oh that our people could and would appreciate the beauty, and often the euphony, always the sentiment, of the Indian names for our towns and our homes—for our broad rivers, as well as our smaller streams—and we should often find ourselves the gainers, in the sweet soft sound that conveys in a



THE SHERMAN FALL.

single word a clear graphic description of a particular locality, which in our language would require words, if not lines, to express the same meaning.

Take, for example, "*Ty-mock-tee*," the *Belt of the Plain*:—who that has seen the beautiful prairies which this little stream incloses, could forget their richly enameled surface of lovely groups of smiling flowers

among the rich verdant green. And again, "*La-gon-da*," the *Creek of the Buck*. Let us, who have taken so much from this deeply injured race, grant to them a small return;—to retain their significant names, in the language so dear to the small remnant, that is rapidly declining and fading from our view.

Memory alone, of the past, will soon be the only trace that the poor Indian has had existence upon the wide-spread prairie, the broad river, and the primeval forest, which were once his own.

Oh! the barbarity, of throwing aside the aboriginal names, which has prevailed all over our country; and alas, it has shielded itself under a classic banner, and eschewing the sweet and expressive Indian words, our geographical nomenclature has been given over to sophomore lore, to show the passer-by that the early pioneers had at least read of Rome, Athens, Cairo, Memphis; or at any rate, that they had heard of modern capitals, equally inappropriate namesakes to their juvenile town-bantlings. We have our Paris, London, Richmond, Baltimore, and a hundred others, at almost every cross-road in the country.

Fortunately, however, we have preserved some of these traces of the earlier history of our country; and to Mrs. SIGOURNEY we are indebted for the following beautiful lines commemorating them.

INDIAN NAMES.

Ye say they all have passed away,
That noble race and brave;
That their light canoes have vanished
From off the crested wave;
That midst the forests where they roamed
There rings no hunter shout:
But their name is on your waters,
Ye may not wash it out.

'Tis where *Ontario's* billow,
Like Ocean's surge is curled;

Where strong *Niagara's* thunders wake
The echo of the world;
Where red *Missouri* bringeth
Rich tribute from the west,
And *Rappahannock* gently sleeps
On green Virginia's breast.

Ye say their cone-like cabins
That clustered o'er the vale,
Have fled away like withered leaves
Before the autumn gale;
But their memory liveth on your hills,
Their baptism on your shore,
Your everlasting rivers speak
Their dialect of yore.

Old *Massachusetts* wears it,
Within her lordly crown;
And broad *Ohio* bears it,
Amidst his young renown;
Connecticut hath wreathed it
Where her quiet foliage waves,
And bold *Kentucky* breathed it
Through all her ancient caves.

Wachusett hides its lingering voice
Within his rocky heart,
And *Alleghany* graves its tone
Throughout his lofty chart;
Monadnock on his forehead bears
Doth seal the sacred trust—
Your mountains build their monument,
Though ye destroy their dust.

Ye call these red-browed brethren
The insects of an hour,
Crushed like the noteless worm amidst
The regions of their power;
Ye drive them from their fathers' lands,
Ye break of faith the seal;
But can ye from the court of Heaven
Shut out their last appeal?

Ye see their unresisting tribes,
With weary step and low,
On through the trackless desert pass,
A caravan of woe.
Think ye the Eternal's ear is deaf?
His sleepless vision dim?
Think ye the soul's blood may not cry
From that far land to Him!

John Sherman, a preacher and teacher in the village, was early attracted by the beauties of the place, and, in 1822, caused a house to be built at the Falls, for the accommodation of visitors, which he called "THE RURAL RETREAT."

Within the last year, Mr. Moore has made very large additions to the building, and the hotel now has a front of one hundred and thirty-six feet, a piazza twelve feet wide, a dining room sixty feet by thirty; large suites of apartments, sleeping rooms well ventilated, and, in fact, all the luxuries of a first-class hotel at a "watering place." A plank road has been laid from Utica hither,—over which the travel is about two hours.

Mr. Moore has been at great trouble and expense in building stairways, and making arrangements for greater convenience and security in visiting the wild chasms of the torrent; and there is at present neither danger nor over-fatigue in seeing all that the place has to show of grand and beautiful. For long visits, which Trenton Falls particularly invite, the hotel will be found a delightful home; and for these Mr. Moore makes the usual accommodations.

This superb scenery of nature, to which thousands now annually resort—a scenery altogether unique in its character, as combining at once the beautiful, the romantic, and the magnificent—all that variety of rocky chasms, cataracts, cascades, rapids, etc., elsewhere separately exhibited in different regions—was, until within five years, not accessible without extreme peril and toil, and therefore not generally known. It is in latitude 43° 23'; 14 miles north of the flourishing city of Utica, the great thoroughfare of this region, situated on a gentle ascent from the bank of the Mohawk, amidst a charming and most fertile country. Hence every facility can be had for a ride to Trenton Falls, where a house of entertainment is erected.

(See Frontispiece.)

The eye, elevated at a considerable angle, beholds a perpendicular rock one hundred feet high, extending across the opening in a diagonal line from the mountainous walls on each side, rising seventy or eighty feet still



THE RURAL RETREAT.

higher. Over this the whole river descends, first perpendicularly about forty feet, the main body rushing to the left. On the right it pours down in a beautiful white sheet. For a short distance in the middle the rock is left entirely naked, exhibiting a perpendicular and bold breastwork, as though reared by art to divide the beautiful white sheet on the one side from the overwhelming fury of the waters on the other. They unite on a flat below; then, with a tumultuous foam, veer suddenly down an inclination of rocky steps, whence the whole river is precipitated into a wide, deep, and dark basin, forty feet underneath—mountainous walls rising on each side of the stream nearly two hundred feet—tall hemlocks and bending cedars extending their branches on the verge above—small shrubbery variegating here and there their stupendous and naked sides. On the right of the basin a charming verdure entirely overspreads a smoothly rounding and majestic prominence, which reaches half way up the towering summit, and over the whole sky mingles with retiring evergreens, until verging in perspective to the distant angle of incidence, they are lost in the ethereal expanse beyond.

Such are the High Falls, which the pen may faintly describe, and of which the pencil may portray the outline, but nature reserves to herself the prerogative of giving to her visitors the rapturous impression.

The view of these Falls varies exceedingly,

according to the plenitude or paucity of the waters. In the autumnal floods, and particularly the spring freshets, arising from the sudden liquefaction of snow in the northern country, the river is swelled a hundred-fold, and comes rushing in a vast body of tumultuous foam from the summit rock into the broad basin at the bottom. It is at this time tremendous indeed, and overpowers man's feeble frame with the paralyzing impression of Omnipotence. On these occasions the solid foundations of the earth are ripped up, and enormous slabs of rock are floated off, or

deposited in piles to the right or left of the all-controlling current. We have in effect the peerless majesty, the awful power, and the deep volleying thunder of the grand cataract of Niagara, which causes the heavens to shake and the earth to tremble; which forces the son of pride to feel himself mere insignificance on the verge of annihilation; and proclaims, in his astounded ears, what is meant by the existence, and what it is to stand before the throne of that Infinite Supreme, who can make such an appalling display upon a comparatively single atom of the universe!



THE NEW HOTEL AT TRENTON FALLS.

WILLIS' description of the Falls is admirable:—

In the long corridor of travel between New York and Niagara, this place, as you know, is a sort of alcove aside—a side-scene out of ear-shot of the crowd—a recess in a window, whither you draw a friend by the button for the sake of chit-chat at ease. It is fifteen miles off at right angles from the general procession, and must be done in vehicle hired at Utica for the purpose; so that, costing more time and money than a hundred miles in any other direction, it is voted a "don't-pay" by promiscuous travelers, and its frequentation sifted accordingly. In gossiping with you about Trenton, therefore, I shall do it with easy pen, the crowd out of the way, and we two snug and confidential. And as

poets and "literary men" are never poetical and literary for their own amusement, you will expect no "fine writing," and none but a spontaneous mention of the moon.

For the heavy price of two subscribers and a half (explained by the editor to mean five dollars) I was not driven fast enough hither to *clear the dust*, metaphorically nor otherwise. I should recommend to you, or to any who come after, to include in the bargain for a conveyance, the time in which the distance is to be done. Is is a ride of no particular interest. With no intimation whatever of the neighborhood of the Falls, we were driven up to the edge of a wood, after fifteen miles of dust and rough jolting, and landed at a house built for one man's wants and belongings—a house which the original forest still

cloaks and umbrellas, leaving only its front portico, like a shirt ruffle, open to the day, and which I pray, with all its homely inconveniences, may never be supplanted by a hotel of the class entitled to keep a gong. Oh, those chalky universes in rural places! What miles around, of green trees and tender grass, do they blaze out of all recognition with their unescapable white paint aggravations of sunshine, and their stretch of unmitigated colonnade! You may as well look at a star with a blazing candle in your eye, as enjoy a landscape in which one of these mountains of illuminated clapboard sits aglare.

Mr. Moore, the landlord at Trenton, is proposing to build a larger house for the accommodation of the public, but this sermon upon our Mont Blanc Hotels, with their Dover Cliff porticoes, is not aimed at him. On subjects of taste he requires no counsel. The engravings a man hangs up in his parlors are a sufficient key to the degree of his refinement; and those which are visible through the soft *demijour* of the apartments in this shaded retreat, might all belong to a connoisseur in art, and are a fair exponent of the proprietor's perception of the beautiful.

In more than one way he is the right kind of man for the keeper of this loveliest of nature's bailiwicks of scenery. On the night of our arrival I was lying awake, somewhere toward midnight, and watching from my window the sifting of moonlight through the woods with the stirring of the night air, when the low undertone of the Falls was suddenly varied with a strain of exquisite music. . . . The player was our landlord, Mr. Moore, who, thus, when his guests are gone to bed, steals an hour of leisure from the night, and, upon a fine organ which stands in one of the inner parlors of his house, plays with admirable taste and execution.

Mr. Moore came here twenty years ago, to enjoy the scenery of which he had heard so much; and, getting a severe fall in climbing the rocks, was for some time confined to his bed at the hotel, then kept by Mr. Sherman, of trout-fishing memory. The kind care with which he was treated resulted in an attachment for one of the daughters of the family, his present wife; he came back, wedded his fair nurse and Trenton for the remainder of his life, and is now the owner and host of the very loveliest scenery-haunt in all our picturesque country.

A STUDENT'S FIRST ESSAY IN HORTICULTURE.

"If we could only live in the country," said my wife, "how much easier it would be to live."

"And how much cheaper," said I.

"To have a little place of our own, and to raise our own things!" said my wife; "dear me! I am heart-sick when I think of the old place at home, and father's great garden. What peaches and melons we used to have—what green peas and corn! Now one has to buy every cent's worth of these things—and how they taste! Such wilted, miserable corn!—such peas! Then, if we lived in the country, we should have our own cow, and milk and cream in abundance—our own hens and chickens. We could have custard and ice-cream every day!"

"To say nothing of the trees and flowers, and all that," said I.

The result of this little domestic duet was, that my wife and I began to ride about the city of —, to look up some

pretty, interesting cottage, where the visions of our rural bliss might be realized. Country residences, near the city, we found to bear rather a high price; so that it was no easy matter to find a situation suitable to the length of our purse; till at last a judicious friend suggested a happy expedient—

"Borrow a few hundred," he said, "and give your note—you can save enough, very soon, to make the difference. When you raise everything you eat, you know it will make your salary go a wonderful deal further."

"Certainly it will," said I. "And what can be more beautiful than to buy places by the simple process of giving one's note—'tis so neat, and handy, and then it is so convenient!"

"Why," pursued my friend, "there is Mr. B., my next door neighbor—'tis enough to make one sick of life in the city to spend a week out on his farm. Such princely living as one gets; and he assures me that

it costs him very little—scarcely anything perceptible, in fact!”

“Indeed!” said I, “few people can say that.”

“Why,” said my friend, “he has a couple of peach-trees for every month, from June till frost, that furnish as many peaches as he and his wife and ten children can dispose of. And then he has grapes, apricots, etc.; and last year his wife sold fifty dollars’ worth from her strawberry patch, and had an abundance for the table besides. Out of the milk of only one cow they had butter enough to sell three or four pounds a week, besides abundance of milk and cream; and madam has the butter for her pocket-money! This is the way country people manage.”

“Glorious,” thought I. And my wife and I could scarce sleep, all night, for the brilliancy of our anticipations!

To be sure our delight was somewhat damped the next day by the coldness with which my good old uncle, Jeremiah Standfast, who happened along at precisely this crisis, listened to our visions.

“You’ll find it *pleasant* enough, in the summer time,” said the hard-fisted old man, twirling his blue checked handkerchief; “but I’m sorry you’ve gone in debt for the land.”

“Oh! but we shall soon save that—it’s so much cheaper living in the country!” said both of us together.

“Well, as to that, I don’t think it is—to city-bred folks.”

Here I broke in with a flood of accounts of Mr. B.’s peach-trees, and Mrs. B.’s strawberries, butter, apricots, etc., etc., to which the old gentleman listened with such a long, leathery, unmoved quietude of visage, as quite provoked me, and gave me the worst possible opinion of his judgment. I was disappointed, too; for, as he was reckoned one of the best practical farmers in the country, I had counted on his enthusiastic sympathy with all my agricultural designs.

“I tell you what, children,” he said, “a body can live in the country, as you say, amazin’ cheap, but then, a body must *know how*”—and my uncle spread his pocket handkerchief thoughtfully out upon his knees, and shook his head gravely.

I thought him a terrible slow, stupid, old booby, and wondered how I had always

entertained so high an opinion of his sense.—“He is evidently getting old,” said I to my wife; “his judgment is not what it used to be.”

At all events, our place was bought, and we moved out, well pleased, the first morning in April, not at all remembering the ill savor of that day for matters of wisdom.—Our place was a pretty cottage, about two miles from the city, with grounds that had been tastefully laid out. There was no lack of winding paths, arbors, flower borders, and rose bushes, with which my wife was especially pleased. There was a little green lot, strolling off down to a brook, with a thick grove of trees at the end, where our cow was to be pastured.

The first week or two went on happily enough in getting our little new pet of a house into trimness and good order; for, as it had been long for sale, of course there was any amount of little repairs that had been left to amuse the leisure hours of the purchaser.—Here a door-step had given way, and needed replacing; there a shutter hung loose, and wanted a hinge; abundance of glass needed setting; as for painting and papering there was no end to that; then my wife wanted a door cut here to make our bed-room more convenient, and a china-closet knocked up there, where no china-closet before had been. We even ventured on throwing out a bay window from our sitting room, because we had luckily lighted on a workman who worked so cheap, that it was an actual saving of money to employ him. And, to be sure, our darling little cottage did lift up its head wonderfully for all this garnishing and furnishing. I got up early every morning, and nailed up the rose bushes, and my wife got up and watered the geraniums, and both flattered ourselves and each other on our early hours and thrifty habits. But soon, like Adam and Eve in Paradise, we found our little domain to ask more hands than ours to get it into shape. So, says I to my wife, “I will bring out a gardener when I come next time, and he shall lay it out, and get it into order, and after that, I can easily keep it by the work of my leisure hours.”

Our gardener was a very sublime sort of a man—an Englishman, and, of course, used to laying out noblemen’s places, and

we became as grasshoppers in our eyes, when he talked of Lord this and that's estate, and began to question us about our carriage drives and conservatory, and we could with difficulty bring the gentleman down to an understanding of the humble limits of our expectations. Merely to dress out the walks and lay out the kitchen-garden, and plant potatoes, turnips, beets, and carrots, was quite a descent for him. In fact, so strong were his æsthetic preferences, that he persuaded my wife to let him dig up all the turf off from the green square opposite the bay window, and to lay it out in divers little triangles resembling small pieces of pie, together with circles, mounds, and various other geometrical ornaments, the planning and planting of which soon engrossed my wife's whole soul. The planting of the potatoes, beets, carrots, etc., was intrusted to a raw Irishman; for, as for me, to confess the truth, I began to fear that digging did not agree with me. It is true that I was exceedingly vigorous at first, and actually planted with my own hands two or three long rows of potatoes; after which, I got a turn of rheumatism in my shoulder, which lasted me a week. Stooping down to plant beets and radishes gave me the vertigo, so that I was obliged to content myself with a general superintendence of the garden; that is to say, I charged my Englishman to see that my Irishman did his duty properly, and then got on my horse, and rode to the city. But about one part of the matter I must say I was not remiss—and that is, in the purchase of seeds and garden utensils. Not a day passed that I did not come home with my pockets stuffed with choice seeds, roots, etc., and the variety of the garden utensils was unequalled. There was not a pruning-hook of any pattern, not a hoe, rake, or spade, great or small, that I did not have a specimen of; and flower seeds and bulbs were also forthcoming in liberal proportions. In fact, I had opened an account at a thriving seed store; for when a man is driving business on a large scale it is not always convenient to hand out the change for every little matter, and buying things on account is as neat and agreeable a mode of acquisition as paying bills with one's note.

[*Exchange.*

Mrs. H. B. Stowe.

Ornamental Trees, Evergreens, etc.

THERE are few places on the habitable globe that have, in so short a period of time, illustrated the beautiful image of the wilderness blossoming as the rose, as our city of Cleveland. Man has indeed done much to render it worthy of the high stand it is likely to assume in the commercial focus of railroads and navigation, and many are the handsome villas adorned with all that architecture can supply to grace their fair proportions. But yet methinks one thing is wanting to give that finish to a residence, so desirable in all climates, but especially where so many months of winter prevail. I mean the dearth of evergreens in our front gardens and door yards.

No people in the world appreciate tastefully arranged grounds more than we, when presented to our view, yet scarce any think of spending a few dollars on these necessary ornaments to the homestead, forgetting that forty or fifty dollars expended in embellishing the garden adds more to the beauty—aye, and the actual value, too—than ten times the amount laid out on the building itself.

I am confident there has not been an ornamental tree planted within the last five years, which has not really more than doubled in value. Why, then, such apathy and niggardly short-sightedness in not only enhancing the market value of our property but adding to the attractions of our far-famed city?

Ask those who have visited England what gives such an air of refinement and comfort throughout that beauteous isle, and they will unanimously attribute it to the picturesque cottages embosomed in shrubbery and evergreens, which alone make the country one continued garden. The peasant cottage surrounded with its cherished garden, has greater attraction for the lover of natural scenery, than avenues of temples and gothic mansions, lacking this one thing needful. If anything can turn those bleak, naked homes into perfect paradises, it is the bright and beautiful drapery of evergreens.

Let none say our country is not adapted to them. Those who see the estimation in which our despised and neglected hemlock is held abroad, are astonished at the indifference it meets with here.

When planted, either singly or in groups or hedges, few foreign trees can rival it, either in color, graceful habit of growth, or beauty

of foliage. Fancy some of our really chaste and elegant villas, thickly studded and surrounded with pines, spruce, balsams, and hemlock, blended with the umbrageous denizens of our native forests. Let any one try the effect (which, I must again reiterate, would also be a profitable investment,) and we should soon change our present proud name of "Forest City," for the still more enviable title of the "Evergreen City."

Trusting the time is not far distant when the refinement of our citizens will enable them fully to appreciate these indispensable requisites for a gentleman's parks or pleasure-grounds, I send you my best wishes for your valuable paper—*Ohio Farmer*.

The Economy of Evergreens.

We have long held the opinion that the character and morals of a rural community are necessarily improved by that most interesting of all kinds of rural embellishment, ornamental planting. But for those who can not appreciate these advantages, we shall present another view of the subject—the saving in dollars and cents.—This, the writer has had an opportunity of witnessing the present winter, in his own case. Nine years ago, finding a serious inconvenience from the sweep of winter tempests, to which his residence was much exposed, a large portion of evergreens were mingled with the trees and shrubbery, then newly set out. About a dozen white pines, as many American arborvitæ, and a few balsams, white spruce, Norway firs, and hemlocks, were placed, so far as practicable, on those sides of the house the most exposed, regard being had at the same time to the exclusion of uninteresting points of view.

One rule was adopted in removing the young evergreens, which were chiefly procured from the borders of woods, and which in some instances were brought twenty miles. This was to take up enough earth on the roots, to preserve the trees upright against strong winds, after first setting out. By this means, not one out of some thirty or forty was lost by removal. A white pine, then about three feet high, and an inch in diameter, is now eighteen feet high, and six inches in diameter; and several others have made nearly an equal growth.

Now for the *economy* of this plantation, which some of the neighbors thought was en-

tirely useless labor. It has saved the present winter, by the protection it affords against storms and wind, at least *ten dollars* in firewood, and this amount saved, is increasing every year as the trees advance in growth. The cost of procuring and setting out the evergreens is about *three dollars*. What farmer, who goes only for "utility," can show as large a per centage of profit in wheat raising or making pork? Whose children would be most likely to seek the tavern, grog-shop, and theater—those who enjoy a home made attractive and beautiful—or those whose home is bald, bleak, and repulsive, from a total want of this cheapest and most natural of all means for its embellishment?

Albany Cultivator.

Large Trees in Western New York.

[Condensed from Silliman's Journal for May.]

There is a swamp white oak on the bank of the Genessee River, about a mile from Genessee. At the height of twenty feet, its body sends forth numerous large branches, some of which are now dead. The trunk has an average circumference of twenty-seven feet, from the ground to the branches. An elm-tree three feet in circumference is partly joined with it; their bodies often touching, and their limbs intertwining.

A swamp white oak on the Genessee Flats, is fourteen feet in circumference; another is thirteen feet nine inches, and a third twelve feet eight inches.

In Alleghany county, New York, I measured a white pine that at the height of four feet was fifteen and a half feet in circumference. One stump was five feet in diameter; another four and a half feet. A saw-log four feet in diameter, by its annular rings showed an age of two hundred and ten years. The largest log ever seen at the mills was seven feet in diameter. A plank from this log, containing six hundred feet, board measure, was exhibited at the county fair, at Angelica. It was sawed several years since. I saw a hemlock twelve and a half feet in circumference.

An elm was cut down last winter near Dresden, Yates county, whose stump is four feet ten inches in diameter, four feet from the ground; at the height of fifteen feet, it was fifteen and a half feet in circumference; its height was about sixty feet; the annular rings indicated an age of three hundred years.

A few years since, there was an elm thirty-three feet in circumference, about one mile from Auburn, New York.

In the township of Sodus, Wayne county, not far from Lake Ontario, are many large sycamores, several of them from fourteen to sixteen feet in diameter.

In Belknap's History of New Hampshire, a white pine is mentioned which was seven feet in diameter.

Michaux, in his Sylva, states that he saw a stump in Maine, more than six feet in diameter. He also measured two trunks that were felled; one was one hundred and fifty-four feet long, and fifty-four inches in diameter; the other one hundred and forty-two feet long, and forty-four inches in diameter.

I quote the above to show that probably no part of the United States can boast of larger white pines than Alleghany county, New York.—*Cin. Commercial*.

ROT IN POTATOS—YELLOWS IN PEACH TREES—DISEASE IN BUTTON WOOD TREES.—The Massachusetts Plowman gives the opinion of its editor that insects are the cause of the potato disease. It is not pretended that the insect has been discovered, but it is his "belief that by the aid of powerful glasses we may yet be able to discover something as fatal to the potato as the squash-bug is to the squash." Is the editor aware that all parts of the potato plant have been often examined by the most "powerful glasses" in existence, without finding any such insects? But the editor claims to reason from analogy, and pretends that what "some people call 'the curl'" and the "yellows" in peach-trees are caused by insects, and that the blight or disease of the button wood or sycamore-tree has a like cause. He says the worms "work in the forepart of the season and eat off the leaves—when the worms cease to work, the tree is again clothed with a new suit, provided the soil is rich enough to furnish the means. If not, the tree dies after a few successive robberies of the leaves, as all plants will." Now, for ourselves, although we have examined both the button wood and peach-tree with some attention, we have never found any insects which could produce the maladies alluded to, and such has been the result of the examination of others. Will Mr. Buckminster have the goodness to send us specimens of the insects, with an account of their habits, which

occasion the diseases spoken of in the button-wood and peach-tree? He thinks "there may be new creations of insects at the present day," and says, "we know that new varieties of insects make their appearance as the country grows older." Will he be so good as to tell us what "new" insects have either been "created" or made their "appearance?" In this matter, we believe "there is nothing new under the sun."—*Albany Cultivator*.

A New Design by Sir Joseph Paxton, for the intended Exhibition of the Industry of all Nations at New York, has been on view in London. The plan is on a similar principle to that of the Crystal Palace in Hyde Park, and the materials are glass, iron and plate. There are two entrances, one at each end, and the construction of the door-way is somewhat similar to that of the transept entrance to the Exhibition in Hyde Park. The roof is to be of slate, in order to resist the weight of snow to which it may be exposed in the United States. The structure will be built upon arches, and the galleries will be supported by brackets. The design is on the whole remarkable, it is said, for its simplicity and practicability. [Will the funds be raised?]

New Invention for Plank and Railroad.—We have been shown a model of a new car or wagon, intended for use on plank roads, and so adapted that it may be used on railroads of cheap construction, the rails being of wood, which appears to us worthy of attention. The inventor is Mr. Edward G. Fitch, of New Orleans, who seems to have devoted much time and study to perfect a cheap means of transportation, of greater capacity than the vehicles commonly in use. This, Mr. F. thinks, has been attained in the present invention, the same drawing force that is used now in the common wagon being adequate to transport some three or four times the amount of produce or other freight. It is so constructed that it may be used either on a plank road or wooden railroad.

The Dahlia.—The Dahlia was discovered in Mexico, by Humboldt, in 1798, and sent by him to the Botanic Garden, at Madrid, where it received its name in honor of the Swedish naturalist, Dahl.



The Vineyard.

VINEYARD CALENDAR FOR JULY.

THIS is the month which, with the closing days of June, is ever pregnant with causes of apprehension to the watchful *vigneron*.—Supposing that every care has been exercised to dress the soil, prune the vines, and tie them securely, and that due vigilance has been practiced to prevent the ravages of the insects which depredate upon the tender shoots and delicate young branches of promising buds and flowers; and further, that a benign Providence has favored the growing crops with the blessings of frequent showers and genial sunshine; everything will now present the brightest promise of abundance, and the avarice of the cultivator may even be tempted to leave too much fruit upon his vines—more than they can safely carry, or perfectly mature. Beware of being too avaricious! all may yet be lost.

The Rot.—With this brilliant prospect of luxuriant and healthy growth of wood, and abundant show of the grape bunches, which often gladdens the heart at the opening of July, we may still look for new difficulties. First, and most to be dreaded, is the malady termed *THE ROT*; the precise nature of which is still enveloped in the mystery of ignorance, having escaped the closest scrutiny that has been brought to bear upon the investigation. We have, however, collected many observations connected with its appearance, and the

immunity from its attacks of certain vines in particular situations; and, alas! we know sorrowfully well its results in casting down to the ground a whole crop, which a week before was full of promise. The atmospheric element most to be dreaded, is continued wet and hot weather about the time the berries are swelling with the hardening of the seeds, or what is technically called the *stoning process*. Hence the vine-dressers desire to see showery and growing weather in May and June, but dry weather in July. Like the wheat-grower, who dreads the "rust," which such weather, just before harvest, brings upon his crops, so the *vigneron* hopes to escape from wet weather at this time.

Cultivation.—It has already been indicated, in previous months, that this process should be pursued during the summer season, rather with a view to keep the surface of the ground clear from weeds and grass, than as a means of stirring the soil deeply. Shallow hoeing from time to time is therefore recommended; which will sufficiently admit the air and warmth to the roots, and also aid materially in the decomposition of manures and other elements of the soil, and better adapt them to the use of the hungry rootlets of the vine. Where horses are used, the cultivator may be passed through the rows; or, with a light plow, furrows may be thrown toward

the plants. All such labor should, however, be avoided in wet weather, especially if the soil be at all stiff and heavy.

Sprouting and Pinching-in.—It is hoped that no one has neglected attending to this important element of summer pruning, in its proper season—before the blossoming; for by such neglect the strength of the vine will have been uselessly expended upon many a shoot that must be sacrificed, or, at least, which will have been lost by not having been properly directed. The early shortening of the vines was urged previously. The extreme end of the shoot may be easily removed; and a change in the direction of the flow of sap is at once effected, toward the canes destined for the next year, and the bearing shoots receive abundant supply for their own leaves to elaborate for the fruit. All vine-dressers are not, however, agreed upon this point.

Sufficient caution was perhaps not given, to have the pinching done before the blossoming of the vines. This is by many considered a critical period; and such persons advise that no work be done in the vineyard while it lasts, and especially that the bearing shoots be not shortened-in, as is too often done, close to the bunch. Indeed, we think that two or more leaves should always be left beyond the fruit. There is reason in this caution: if the shoot be vigorous, and have grown a couple of feet, it must have a considerable amount of sap flowing into it, and directed to the leaves above, which is thus suddenly thrown in upon the fruit when the upper portion has been broken off too closely.

If, however, the summer pruning have been neglected to this time, it is recommended by some, to wait until a couple of weeks after the blossoms have set, and then to attend to thinning the redundant wood, and especially to avoid leaving too much fruit.

Tying—Should never be neglected. Constantly watch the protruding shoots, and

secure them to the stakes. During this month the long canes for next year will require to be trained from one stake to another.

In this process the advantage of closer planting in wider rows, say six feet apart, by three in the row, will be apparent. The trellis, particularly that made of stout wire, will also be very convenient in attending to this duty. Its advantages have been already pointed out. The fruit branches will also sometimes require support, as their burden increases in weight; though it is no disadvantage to the bunches to let them lie even upon the ground. The rot is seldom found in fruit so situated; and it has been observed that such are often the earliest ripened bunches.

Insects—And every other depredator and intruder, should be carefully watched, and, if possible, prevented from trespassing among the vines. "No admittance!" be the word.

Ringing—Should now be practiced, by all those who desire to hasten the maturity of a portion of their crop. It is not recommended, however, for general application. This is performed by passing a sharp knife around the last year's wood, so as to cut through the bark in two places half an inch apart; and then, by splitting the included portion of bark, it may be entirely removed with a slight effort, leaving the wood clean. If practiced at the time when the leaves are just sufficiently matured to be sending down the *cambium*, no injury will be done by this operation. A callus of new matter soon closes the gap, and completes the interrupted connection between the roots and the leaves; but the *free* descent of sap is not entirely restored, and the leaves having more time to elaborate their juices, the fruit receives a greater share of nourishment, and is proportionally improved. For the *Isabella* this is particularly recommended, as a means of perfecting that variety with greatly enlarged and regularly ripened fruit. This effect is sometimes pro-

duced in a natural way, by a strong tendril clasping a vine tightly. In vineyard culture, the *Isabella* usually sets more bunches of fruit than it can ripen. These should be thinned-out, and not more than ten to fifteen bunches left on the vine, according to its age and vigor.

FOREIGN VINE CULTURE.

MODES OF TRAINING, MANURING, AND CULTIVATION.

See Frontispiece of No. 8.

In ancient times the Romans trained their high vines as they now do in Tuscany, along palisades or from tree to tree. This mode is still followed in some parts of southern France. The vine is planted near a maple, a cherry-tree, or an elm, sometimes with a single stem, sometimes with two; the vine is suffered to interlace itself with the branches of the tree. The grapes are often shaded in this way, by the leaves above them, from the heat of the sun, and do not reach maturity, so that the wine made from them is acid and cold.

When two stocks are planted, they are suffered to grow up the fork of the tree, and are then carried in festoons to the neighboring branches. Columella says, the ancients planted six stocks to one tree; but not more than three are ever planted now. In ancient times, too, the trees were twenty feet asunder, as is gathered from another authority. It is found that by the present method the fruit ripens well. The land is cultivated below with leguminous vegetables: although no object can be more beautiful than a vineyard planted in this manner, the product of the vines is injured by the cultivation beneath, if too extensive. Most persons believe that this is the mode adopted in all vineyards, hence they are disappointed on first seeing vineyards upon the Continent, particularly those of the north.

It happens in too many instances that the trees which sustain the vines are irregularly planted; some are too near each other, and some too far off. In particular places a kind of ladder-work is substituted for the trees, about eight or nine feet in height, and placed at about the same distance asunder;—the vines are then led in festoons from one to the other. At Weissemburg they are trained in bowers, or on palisades. This method is denominated in France, that of the high stem training (*tige haut*), in opposition to the low (*tige bas*.)

By far the greater part of the European vines, if not all north of Provence, are of the low training, and, indeed, this may be styled the general method in France, Germany, Switzerland, and Hungary. Trellis work of arches is adopted in Italy for most villa gardens. In the Campagna, and in Lombardy, poles and trellis work are both used.

The vines on the hills are dressed in terraces, and wheat sown between. The vines of Greece, Cyprus and Candia, are seldom above three feet high, but being very thick in the stalk, and grown like pollards, they are left to themselves for support. In the low mode of culture in various places there are methods equally various adopted for propping the plant. The simplest is the single prop, to which the vine to about three feet high is affixed. Another method is to train its branches one over the other, like Espalier fruit trees. The plants in some places are so low as to be left to themselves; or they are trained along little rods in circles, or on low trellises near the ground, and carried out horizontally. In Baden they are trained on pyramids of poles, in a complex manner. The result of experience is, that the high training by festoons is best adapted to certain situations in warm climates, and the low to those which are colder; while the vines grown on a sandy site may be left to run along the surface of the earth, though this cannot be done to advantage in soil of any other quality.

Cultivation and Manuring.—The ground of a vineyard is dressed in different ways, according to the custom of the cultivator, and the nature of the soil. If it be dry and sandy it is sometimes deeply raked. Many vine growers use the plow between the vines, and some substitute the hoe; pickaxes of various shapes are adopted in particular places—the spade, and even the pickfork. On steep slopes the ground is turned over

or raked in a diagonal direction. Weeds must be hoed up, and a hollow left round the roots of the vine in young plantations to retain the moisture; in fact, the earlier years of a vine plantation require great and incessant attention. Though the ground must be kept clean of weeds in light soils, the earth is not turned up to any depth from the surface. Over-laboring at the soil is prejudicial, while everything must be accommodated to the nature of the stratum below. In Spain, and in some parts of the Lyonnais, the ground is left in its natural state, when the roots are imbedded in a rocky superficies slightly covered with vegetable matter. Three or four times a year in certain districts the ground is worked, and in others many times more.

When vines are manured, it must be with great judgment in the choice of material.—March is the best time for this. But litter should never be used; ashes are considered good, and pigeons' dung best of all; the scouring of ditches and roads is excellent; but the nature of the soil of the vineyard should decide as to the compost to be used. Lupines are in some parts of France sown among the vines, and buried, when in flower, round their roots, where they decay,—a practice found to be of great utility to the crops. A good dressing is obtained in various old earths from meadows or woods, of a different quality from those of the vineyard; a dressing of this kind will last ten years, and keep the vine in bearing. After all, the judgment of the cultivator must decide on the compost most suitable to the situation. Many obstinately use rich dressing in a considerable quantity, but it injures the fruit if not of a proper kind, and the wine made from vines so treated is apt to turn ropy, and be ill flavored. The leaves in a year or two acquire a yellow tint, the stems decay, and the vineyard must be renewed. A moderate dressing only should be given. The decayed branches of the vine, the leaves of most vegetable substances, such as broom, briars, thorns, lucerne, and several kinds of grapes are observed to fertilize the vine; marine weeds must be used sparingly; so must animal manure, though that of birds is found to be beneficial. The Portuguese and French agree in their experience of the substances useful or detrimental for vine dressing.

Next to the soil and care of the cultivator, the season is of importance. A cold wet season, as already stated, is injurious; the grapes produced being insipid. The prevalence of high winds is a source of mischief. And lastly, too high a temperature for long periods together. The favorable season is that which allows the vine to flower in calm, warm, dry weather, if followed by warm showers just as the fruit begins to form, and when the heat desirable in the best stage for bringing it to full maturity is uniform, and uninterrupted by humidity.

Vines may be regenerated; in France this is done by what is called *provignage* and *couchage*. In the first mode the old vines are laid in the ground, and only two or three of the younger shoots are suffered to appear above the surface. This should be done in autumn in a warm climate, in a cold one in February. After the layer takes, it is cut from the old stock. The *couchage* differs in some respects from the former method, but has the same object: the vine is laid in the ground from December till March, but not till the buds appear. Old vines are frequently dug up and cleared, and again planted, by which they receive great benefit.

The vines are pruned three times before they bear fruit, when this operation is again repeated. In pruning there are rules to be observed, dictated by experience, which are too copious to detail. The pruning is directed more especially to the objects of the proprietor, as to present or protracted profit. In hot climates pruning takes place just before the fall of the leaf, and that is considered the best period. In the northern and middle districts of France, the first or second week in March is by most growers deemed an eligible time. The vine is frequently pruned with an instrument made on purpose, which accelerates the operation, and prevents the branches from being bruised. Besides pruning, the vines are deprived of a portion of their buds, to increase the size of the fruit: to do this well, is considered a work of judgment; and it is generally undertaken immediately after the flowers are put forth.

The vine, as already shown, is not always propped, though in the north of Europe this is generally the practice. The time chosen is after the first working of the ground in

spring, before budding takes place, care being taken to avoid injuring the roots. The vines are tied to the props in a particular manner, with osiers if attached to a single prop; or if to espaliers, or props placed palisade fashion, with straw bands. Whichever mode is adopted, it should be undertaken just as the vine has done flowering. There is also an operation styled clipping, which is performed by taking off certain shoots above the joints; the object of this is to increase the flavor of the fruit: it requires great care in the performance. In Cyprus the ground is hollowed in a cup-like form round the plant, to retain the moisture and reflect the heat, for a certain degree of humidity is needful at a proper season.

In some countries where wine is carefully made, recourse is frequently had to the annular incision, in order to hasten the maturing of the grape, and increase its good qualities. A tight band of iron wire has been applied in Italy, and in Germany also, for the same end. The practice of incision is supposed to have been known to the ancients, to have been lost in the middle ages, and again resumed at the beginning of the eighteenth century. The method in Italy is to loosen a band of the bark all round the branch, or stem, a little time before the plant flowers. The operation is performed only when a wet or cold season would prevent the setting of the fruit, six or eight days before the flowering, as damp seasons make harsh or insipid acescent wine. Incision may take place on the old or young wood. The breadth is from a line to an inch. The vine leaves soon show a tint of advancing maturity. Nature most generally clothes the naked part of the stem with a substance poured out from between the bark and body above, which replaces the bark taken away. If this does not happen, the vine dies about where the incision was made, and fresh shoots yield fruit from below. Maturity is advanced from ten to fifteen days by the annular incision, according to the French cultivators of Côte d'Or and l'Yonne. It is performed there with an instrument made for the purpose. A hempen string steeped in oil, is sometimes used on young trees.

The age to which the vine bears well is from sixty to seventy years, or more, and in the common course of things it is six or

seven before it is in full bearing. In parts of the Gironde department in France, the vine does not bear well beyond forty years. In others, on a sandy soil, it will live and bear well to one hundred and fifty or more. Bosc says, a vine in Burgundy had reached four hundred years; and in some Italian vineyards, plants three centuries old, still flourish and bear. The ancients gave the vine a longevity of six hundred years.

The loss of time in bearing may be obviated by grafting on the stocks, or rather roots. There are two or three different modes of doing this. By that commonly adopted in the Bordelais, a whole vineyard may be grafted for three francs per cent. of the successful grafts to the workman, and he will graft two hundred vines or more in a day. Vegetation proceeds slowly until July, when the shoots almost dart forth, and grapes are produced for the same year's vintage. The operation is simple but curious; and by saving time to the grower, is of the utmost importance, besides husbanding his capital.

There is yet another operation to which the vine must submit, in order to improve the quality of the fruit, and that is, taking off the leaves. This is adopted only in humid seasons, or situations in the north. In the Calabrias, and south of Italy, they are obliged to have recourse to the opposite mode, and shade their vines from the too fervent heat of the solar rays with fern leaves.

Redding on the Vine.

TO PRESERVE GRAPES.—For the purpose of preserving grapes during several months, and almost till the month of April, the following plan is very commonly adopted in the East, more especially in Constantinople:—Let a hole be dug in the ground—20 or 30 feet deep, by 8 or ten wide. In this pit the grapes are to be deposited by hanging them all around; lighted straw is now to be thrown in, and while the pit is still full of smoke the aperture is hermetically closed. If after the lapse of some months this pit be opened, the grapes will be found in a state of excellent preservation; and on allowing them to stand for some time in cold water, they acquire all their natural freshness. Their preservation is doubtless attributable to the antiseptic agency of carbonic acid, carbonic oxyd, and empyreumatic matter resulting from the combustion of the straw.—*Ohio Farmer.*

MANUFACTURE OF BRANDIES.

To the American Wine-Growers' Association.

GENTLEMEN:—If the influence of the Maine liquor law should not reach our backwoods, and lead us, as it did many persons in "the land of steady habits," to cut down our apple-trees and our grape-vines; the manufacture of brandy from inferior wine, from sediment, and the marc—the distillation of brandy, at least as a medicine, may become a subject of interest. As a medicine it is particularly desirable to have a pure article. A large portion of the brandy used here is of domestic manufacture, from whisky.

Our European vine-dressers all assure us, that but a very small portion of our imported brandy is produced even from the sediment and marc of the grape; that nine-tenths is made from the prune and potato. But the questions to which I wish to draw your attention, are,

1st. Can better brandy be made from perfect wine, than from wine which has become acid, and is no longer of value as wine?

2d. Can as good brandy be made from the sediment and marc, as from wine?

3d. Can as good brandy be made by steam, as in the old-fashioned method in a copper still?

Mr. Brace states, that higher flavored, and better brandy can be made from wine which has undergone a partial acetous fermentation, than from sound wine; that better brandy can be made from sediment and marc, than from sound wine; and that as good brandy can be made by steam, as by the old method. I incline to the opinion, that in his two last propositions he errs. What say you?

This is certain: whisky manufactured in copper stills sells higher than that manufactured by steam, and is deemed its superior in quality. If true in distillation from grain, does not the same reason apply where the

distillation is from the grape? The latter question is easily settled by a comparison of the brandy from wine, and from the sediment and marc. Our Catawba brandy, with proper age, will be found superior to foreign brandy, as it retains the fine aroma and flavor of the Catawba grape.

N. L.

[This paper was read in March, and referred to J. BRACE, who furnished the subjoined Report to the April meeting.]

To the American Wine-Growers' Association.

GENTLEMEN:—By a resolution of your body, a communication from Mr. N. Longworth was referred to me, for my views in answer to some queries it contained respecting the manufacture of brandy from the different products of the grape, such as from sound wine, and wine that had undergone an acetous fermentation, also from the sediment and from the marc (or cheese.) I suggested to Mr. Longworth, I thought better brandy could be produced from wine with some acetic acid in it, than from that having none; that peculiar fine aroma possessed by the highest grade of imported brandy, is undoubtedly the result of distilling wine that was more or less acidified. Cheap as wine is, in many countries, there is none that would profitably allow it to be distilled into brandy, if it were merchantable; consequently the majority, if not all the brandy, is the product of inferior and unsaleable wine, and much of the highest flavor, such as is sought after with avidity by dealers (for mixing,) is the product of the marc and settlings distilled off rapidly, to obtain as much as possible of the essential oil of the grape, and the ethereal product from the acid contained in such soured lees and marc, and skins of the fruit. This article communicates a brandy flavor to neutral or pure spirit from grain, and forms the basis,

(a very small basis indeed,) of much of the "pure brandy" sold in our market. Indeed there is much spirit sold *here* for good brandy, that has not a particle of grape spirit in it, the flavor of the grain spirit being covered with the macerated German prune; and there is no doubt tons of that fruit are used in this city every year, in the fabrication of this fictitious article, that does not taste like whisky, and must of course be the *simon-pure* brandy.

In distilling the lees and marc, there has always been a difficulty in preventing its burning on the copper, and thus communicating a bad flavor to the spirit. Many plans have been adopted in France, some of them very expensive, to distil the lees and marc; but I should think none of them as good as would be an apparatus, so contrived that the spirit could be obtained by the introduction of steam into the mass. This would obviate the danger of burning, and at the same time would drive over a larger amount of the essential oil of the grape, that is contained in the skin and seeds of the fruit, and make a higher flavored spirit than could be obtained from distilling the marc in copper directly over the fire. If our dealers must buy this highly flavored article, our own vine-dressers may as well take advantage of such sales, as those cultivating the vine in Europe, who now supply the demand.

Mr. Longworth suggests, that because whisky distilled by steam, is of inferior quality to that produced from copper distillation, the same objection would hold good in the case of distilling wine lees and marc. I contend that just the reverse is the fact; my reasons are, that in distilling grain spirit by steam, it is done under a pressure of from one-half to two-thirds of an atmosphere, and consequently at a heat that drives off much of the essential oil of the grain, a very offensive article which gives to the *raw* spirit a rank

unpleasant odor and taste. Some estimate can be formed of the difference in amount of oil driven over, when I state that in an ordinary steam still of the capacity of forty gallons of spirit, ten per cent. above proof is driven off in five minutes directly from the grain mash; but in distilling by means of copper the heat is much less intense, and the mash is subjected to a lower temperature, volatilizing less of the essential oil of the grain, thus rendering the spirit less acrid and pungent. There is still another reason why most copper distilled spirit is of a finer flavor: the plan of working is such that much if not all of their mash sours, and contains considerable acetic acid before it goes to the still. On the other hand, in large steam establishments, their work is more perfectly done, their fermentations kept sweet, and better results obtained, when quantity not quality is the great desideratum.

I should think from the experience I have had in distilling different fermented substances, that to obtain a good brandy, wine that had an appreciable quantity of acetic acid would produce the best spirit, both as respects flavor, and for medicinal purposes; for I think the peculiar value of good pure brandy over other spirit as a medicine, is owing more to the ethereal qualities, than to any particular efficacy it possesses otherwise. Pure alcohol, I claim as essentially the same, let it be the product of starch, cane, or grape. Sugar, and the different qualities of spirits, owe their variety wholly to the essential oils and ethers contained and produced in their manufacture.

To conclude, I think a better brandy for medicine can be made from soured wine than from sound, and that a better and more profitable brandy can be made (*for the mixers of spirits*) from sediment and marc than from pure wine. All of which is respectfully submitted.

JULIUS BRACE.



The Garden.

THE STRAWBERRY.

DR. WARDER:—By accident, the Boston Evening Transcript, of July 12th, 1847, came under my view this evening. There is an article in it, lauding Hovey's Boston Pine to the skies, and casting great abuse on our Horticultural Society, for condemning it as unproductive. If they tell the truth, it surpasses all varieties that are ever dreamed of in these days; "one hundred and forty-three green and ripe berries on one plant." The Bostonians are a church-going people, and we must not doubt their word.

Have the Bostonians yet discovered their error? I presume not. To avoid mistakes, they take years to decide, what we in the backwoods decide at a single glance. Mr. Hovey himself, the head of their horticulturists, was near ten years before he came to a positive conclusion as to the sexual character of his pistillate seedling; and during that period yearly changed his opinions.

Of Cincinnati, they say, "our fruit is so sour, that the berries will curdle milk; and without the Boston varieties, our market would not be at all noted for this description of fruit." There is some truth in the declaration that we prefer varieties that require sugar. But it is not true that the Boston varieties abound in our market. A quart of the Boston Pine was never seen in our market. There are but few of the Pistillate Hovey. We do not deem it a high flavored fruit, and prefer some varieties that are more acid and require more sugar. The Ho-

vey Seedling is not profitable as a market fruit. The berries that first ripen are of large size, and meet a ready sale, on account of their size. But the residue of the fruit is so small, as to meet with no demand.

Before our new seedlings were introduced, there were one thousand bushels of the Hudson sold in our markets, to one of the Hovey. Even our new seedlings as a market fruit, will find a strong rival in the old *sour* Hudson. It is not a large fruit, but its medium size is larger than the Hovey, and where sugar abounds, it will find but few rivals. This fruit, a half a century ago, was almost exclusively cultivated East; it has disappeared even in Philadelphia. It was brought to our city, as I am informed, thirty years ago, by their great strawberry grower, Mr. Arbignst, and has been kept pure to this day.

HORTICULTURIST.

—
Methinks you're over nice.
True; flattery is a shocking vice;
Yet, sure, whene'er the praise is just,
One may commend without distrust.

"At the Cincinnati Horticultural Society's meeting, June 26th, Mr. Longworth exhibited Fastolf raspberries, and the white pond-lily of New England, which is becoming an object of culture in his vicinity. Twelve varieties of strawberry were displayed on one stand; many of which, of high repute and cost elsewhere, were proved to be worthless by two years' cultivation; conspicuously worthless were Hovey's Boston Pine, Buist's Prize Seedling, and British Queen. 'These are clearly staminate plants, and do not set and perfect one fruit in ten.'"

We clip the above from the Post, and embrace the opportunity to pronounce the opinion which is given in regard to Hovey's Boston Pine, premature and false in every respect. We happen to know something of the two famous strawberries produced by Messrs. Hovey, and we have more than once spoken of them. By the invitation of these gentlemen we have, both last year and this, visited their extensive nurseries at Cambridge, in company with several members of the Massachusetts Horticultural Society, for the express purpose of inspecting the strawberry beds, and testing the merits of the two kinds in comparison with all the sorts in cultivation, and not only have they been decided to be the highest flavored, largest, and best strawberries yet produced, but by far the most productive. Our Cincinnati cultivators appear to be particularly knowing about the strawberry, and would lead us to think, because they grow the common kinds in fields, by the acre, that they alone have found the true art of cultivation. Persons who have been in Cincinnati the present season, state that the strawberry is brought to market in great masses, in a very bad condition, *with the hulls on*, and that a great portion of them are bruised and mashed, and the fruit so very sour, that the berries will curdle milk, and that without the Boston varieties, their market would not be at all noted for this description of fruit.

The Boston market for fruit, and especially the strawberry, is unequalled in the country, although it must be confessed our citizens have to *pay pretty dear for all which is good*. The two varieties of Messrs. Hovey, (the Seedling and Pine,) have taken the place of the old and inferior sorts, and the magnificence of the specimens which are daily brought in, has not yet been equaled.

It is but ten days since we had the pleasure of testing the quality of the Boston Pine, the variety which is above stated to be "conspicuously worthless" by the Cincinnati Horticultural Society; and when we state that Mr. Breck, of the Agricultural Warehouse, counted *on one plant, one hundred and forty-three ripe and green berries*, some idea can be formed of its productiveness. In the bed which we examined, the ground was literally red with fruit. The truth is, that some of our Western friends are a little sensitive about this matter of the strawberry, and are

unwilling to admit the excellence of another Eastern seedling. It would show more wisdom, if they were to give a variety a fair trial, before taking the cue from Mr. Longworth, and pronouncing a variety worthless. It is only two years since the plants were first offered for sale; and until the present year, when some fine specimens were shown at the hall of the Agricultural Society, it has not been exhibited by any cultivators except the original, and all the specimens shown by them have elicited the admiration of every beholder.

Of the Buist Seedling, named above, we know very little. A fine basket of the variety was exhibited by Messrs. Hovey on Saturday last, at the Horticultural Society's room. The berries were of good size, and the appearance fine; but whether it is a productive variety, or of good flavor, we have had no opportunity to decide.

We do not make these observations for the purpose of praising the Boston Pine, as its reputation is already as well determined as the Hovey Seedling, but with the object of showing the absurdity which has obtained of late, of one Horticultural Society assuming the power of pronouncing upon the merits of a strawberry, or any other fruit, of which they know nothing except from the mere appearance of the specimens before them.

Soils.

The following classification of soils was recommended by Mr. Griffiths, land surveyor. It will be found interesting to the student and to the general reader, as an agricultural nomenclature.

All soils may be arranged under four heads, each representing the characteristic ingredients, as 1. Argillaceous, or clayey; 2. Silicious, or sandy; 3. Calcareous, or limy; 4. Peaty.

For practical purposes it will be desirable to subdivide each of these classes:—

Thus argillaceous soils may be divided into three varieties, viz: Clay, clay loam, and argillaceous alluvial.

Of silicious soils there are four varieties, viz: Sandy, gravelly, slaty, and rocky.

Of calcareous soils we have three varieties, viz: Limestone, limestone gravel, and marl.

Of peat soils, two varieties, viz: Moor, and peat, or bog.

In describing in the field-book the different qualities of soils, the following explanatory words may be used as occasion may require:

Stiff.—Where a soil contains a large proportion, say one-half or even more, of tenacious clay, it is called stiff. In dry weather this kind of soil cracks and opens, and has a tendency to form into large and hard lumps, particularly if plowed in wet weather.

Friable.—Where the soil is loose and open, as is generally the case in sandy, gravelly, and moory lands.

Strong.—Where a soil contains a considerable portion of clay, and has some tendency to form into clods or lumps, it may be called strong.

Deep.—Where the soil exceeds ten inches in depth, the term deep may be applied.

Shallow.—Where the depth of the soil is less than eight inches.

Dry.—Where the soil is friable, and the sub-soil porous (if there be no springs,) the term dry should be used.

Wet.—Where the soil, or sub-soil, is very tenacious, or where springs are numerous.

Sharp.—Where there is a moderate proportion of gravel or small stones.

Fine or soft.—Where the soil contains no gravel, but is chiefly composed of very fine sand, or soft light earth without gravel.

Cold.—Where the soil rests on a tenacious clay sub-soil, and has a tendency, when in pasture, to produce rushes and other aquatic plants.

Sandy or gravelly.—Where there is a large proportion of sand or gravel through the soil.

Slaty.—Where the slaty sub-stratum is much intermixed with the soil.

Worn.—Where the soil has been a long time under cultivation, without rest or manure.

Poor.—Where the land is naturally of bad quality.

Hungry.—Where the soil contains a considerable portion of gravel, or coarse sand, resting on a gravelly sub-soil; on such land, manure does not produce the usual effect.

The colors of soils may also be introduced, as brown, yellow, blue, gray, red, black, etc.

Also, where applicable, the words steep, level, shrubby, rocky, exposed, etc., may be used.—*Exchange.*

PRUNING ROSES.

Of all the roses which I left unpruned last winter, and which turned out so well, I think *Baron Prevost*, *Mrs. Elliott* the *Duchess of Sutherland*, and *Fulgorie*, are the best. No one could make out any difference in most of the flowers of *Fulgorie*, before they were quite expanded, from those of the old cabbage rose, and they were fully as sweet. It is an old variety of the new breed of hybrid perpetuals; the habit of it is very bad indeed, and it does worse on the dog rose than on its own roots. It always makes one or two good shoots at the expense of all the rest; and sometimes, when you prune it close, it either dies outright, or gets so irregular in the head, that no one can bear to see it. Like the *Gloire des Rosamenes* it does best on its own roots; and, with all its faults of habit, no one who has ever admired the old cabbage rose—the best of them all—should be without it. In October, and as long as the frost will allow it, you can cut abundance of roses as good and as sweet from *Fulgorie* as any one can get in June.

It is also the only rose I know of that will grow well for more than a few years on the Ayrshire roses, such as *Ruga*. I have had it now eight years on three climbers of the Ayrshire breed, and doing as well as I could desire; and I am strongly of the opinion that it should not be worked on the dog rose at all; and I am also of opinion, that having had the same attention as to summer pruning as the climbers in which it is budded, has had some influence on it, and caused it to do better than if it had been treated in the usual way of dwarf roses. At any rate, one thing is quite certain, which is, that this, the sweetest and the latest flowering of our perpetual bloomers, will bud and do well on a class of popular climbing roses, on which no other rose will live more than a few years. *Baron Prevost* is certainly the most splendid rose, and the largest we have of all the perpetuals; under the plan of not pruning it in winter, the size of the flowers, with me, was immense. *Compte de Montalivet* has a larger and wider face than the *Baron*; but then it is only a

very thin rose, semi-double as it is termed, and is best to be looked at from a little distance; it will not bear a close inspection. Nevertheless from its enormous size, and having a tint which is rare in roses, it should be grown in quantities, as we do the *Gloire des Rosamenes*. It is the only rose I know which hides its only fault, that is its want of doubleness: instead of opening a full face like *Gloire de Rosamene*, and showing the "evil eye," the petals actually fold inward toward the eye, and hide it completely; and you might suppose, at a little distance from it, that you saw the largest and most double rose in England, when, if this Compté opened back like other roses, it would look as much like a half-double hollyhock as anything else I can think of. *Mrs. Elliott* should certainly never be close pruned. It made shoots of more than four feet long with me last year, the very top buds of which produced the finest sample of the variety I ever saw. This, and *William Jesse* looked as if they were varnished with that rich metallic luster which they alone, of all the roses, exhibit in the most perfect degree. *La Reine* never does well on our light soil; and on the no-pruning system it was worse than before. *Prince Albert*, with *Earl Talbot*, and two or three fine roses which require a very favorable season to open them finely with us here, did not answer better by not being pruned. Therefore, I am led to this conclusion, with respect to the experiment—as far as it has gone—that it does not help natural defects in a rose, unless, indeed, it may turn out this autumn that the shy openers may unfold themselves more freely under the next stage of the experiment, which I last week promised to allude to; but before I do so, and whilst I think of it, I must tell how I managed to make a hedge of perpetual roses without laying down a regular foundation for one.

Ever since our hedges of the *Gloire des Rosamenes* began to draw the attention of visitors to that style of exhibiting them in pleasure-grounds, my worthy employers were desirous that others, including the *Moss* and old cabbage roses, should be tried in hedges also; and I am not very sure that this earnest request was not at the bottom of my experiment of not pruning in winter; at all events, it has ended in part of the trial. Four years since I planted one or two specimens of all our best roses in a row, from the door of my

cottage down in front of a peach border, and only eighteen inches from the side of the walk. They were all budded on six inch stocks of the *Boursault*, the best stock for our light land, were it not the bother it gives one to keep down suckers. These were intended to "kill two birds with one stone;" first, for cut flowers; and, when they got too large and encroached on the walk, to be potted for forcing, or to be sent to the "rosary," full-grown, and still in the prime of youth. Well, as soon as the experiment of letting a great number of roses go unpruned was determined on, this row in front of my house was at once fixed on to make a hedge of, and such a hedge I never saw before. Without any romance, it was literally hung with roses, as you would see onions tied on ropes for a country fair. Last winter the row was turned into a hedge in two days: a row of stakes were set a yard or so apart down the middle of the row, and straight hazel rods were put in horizontally and tied to the upright stakes; the unpruned shoots of the roses were trained at full length right and left, against the rods, and the whole was kept as low as we could, so as not to shade the peach border too much. It is only a little better than a yard high, and shall be kept to that height. Now to do this properly will explain what I mean to do with all the unpruned roses for the rest of the season.

We have trained raspberry canes in various ways time out of mind, some upright, some slanting to one side, and others arched over between stool and stool; as soon as the crop was over, in my younger days, the canes which produced it were cut out, no matter how green their leaves might be at the time; this was told me to be for letting in more light and air to the canes which were to bear next year and that cutting away the bearing canes as above would give all the benefit of the roots to those of the next year's bearing. But whether all this was right or wrong, or partly both, is not for me to say. Mr. Errington must know all about it, and can explain it better than is necessary for me to try on this occasion. But I well recollect that under that system, for years and years, I used to see the best crops of raspberries; and, therefore, I intend to try the same plan with these roses, with only a little variation. Indeed I am doing so just now, and I think it will answer capitally. The raspberry canes were allowed to ripen the fruit, and no more; the rose

shoots will be allowed only time to ripen their flowers, and not even that in some cases: for I see that as soon as the top rose on a long shoot is in full bloom, and so will not allow the shoot to extend any more in that direction, the eyes on the bare part of this shoot begin to grow away in earnest, and exhibit that impatience of restraint which caused people to give up the plan of training down roses in the rose beds.

Now there is a philosophical knot on this shoot, just between the flower bearing top part and that portion of it about to break into new shoots, which if I had the necessary time to discuss, I should like very much to cut, if only half way through, as they do for layering rose shoots; as it is, I must be content with saying, that throughout the season, that is, through July, August, and September, the flowering shoots will be cut down from time to time, as the first roses on them are past their best, without waiting for all the buds on every little side shoot to open. Some early bloomers that have been so cut at the very end of June, are now in bloom from the next succession of shoots from below; and if all the eyes, down to the very bottom of last year's wood, do not break out into flowering branches at this first succession, the shoots will be cut down in August still lower, and then be in the same shape as they would have been at a winter pruning; that is, in the effect, but not so in reality, as the shoots on any given plant are not all to be cut down at one time, but in succession.

If this system does not injure the plants in the long run, and I do not think it will, if the plants are kept well fed, the advantages I expect from it are flowers a week or ten days earlier in May, and four times as many flowers from the same plants in the course of our season. I think I can see conclusively, through this experiment, the utter folly and the unscientific bearing of the common practice of pruning roses in the spring in our climate, at least; and not only roses but all other bushes and trees which cast their leaves in the autumn. As soon as the leaves are down is the proper time to prune except in special cases; and such cases do occur every season, and in both sides of what may be called the meridian time in pruning. On this side of the line, we all know that weak growing trees, or other plants, can be improved both in health and vigor by being pruned six weeks before the

fall of the leaf, as had been long since proved on scientific grounds by Mr. Knight, and Mr. Williams, of Pitmaston, in the case of some fruit trees; and on the other side of the line, we are equally certain that it is right to put off the pruning season of some fruit and flowering plants, roses among the rest, till late in the spring. Still, such exceptional cases do not weaken the general rule, or the principle of the practice.—*Collage Gardener*.

[Here are some excellent suggestions as to pruning, which should be studied by our rose fanciers. Every one will soon learn that each variety requires a special treatment and pruning, more or less peculiar to itself. Some good hints as to budding will be found in the following extracts from the same authority.]

No sooner do we get the flower garden up to the full standard of present ideas of perfection, than we begin to think of how we can improve it, or, at any rate, provide for it the year following. Every one who can afford an extra bed next year, can not do better than go to work immediately with the cream of all the new roses. *Geant des Battailles*, the best one in every respect for planting by itself, in groups, or in beds. For such a purpose, if the soil is light and rich, it will do as well, if not better, on its own roots than if worked on the dog rose.

There is no way of showing off this splendid rose half so well as having it entirely by itself. It should never be disgraced by working it mop fashion, as a standard. Tall standards are getting less fashionable every year, and I rejoice at the change. Nothing above three feet stems are now admitted into first-rate gardens, with people of good taste; and for rose beds, if they are budded just out of the ground, it is better than anything higher. At the present moment, I would bud every rose sucker that I could find, all over the garden, instead of pulling them up as we usually do; and, for the first two or three years I would let them take their own chance. If the suckers were from some old standard, the new rose, or indeed, any roses budded on them, would help to bide the ugly, naked stems, and by that time, or sooner, some good genius of the rosary might kill or injure the head, leaving a full bottom and a choice sort or sorts behind. This is the only way I know of for reconciling us to part with an old favor-

ite standard rose, which we ourselves, or some one dear to us, had budded years ago.

This is an experiment I have over and over again indulged in, and I always found it as I say. About seven or eight years since, I had a beautiful little rose, a perpetual, on a tall standard. It did not seem quite at home, and the stock was prone to make suckers. I budded some of the strongest of these about a foot from the ground, with *Gloire des Rosamenes*, which we did not then know, was so loth to grow on any but its own roots. I also budded about a hundred of it on different stocks the same season, all of which have been dead long since, except these, which grew away famously, and soon hid the naked stem and sucked the juices from the roots, so as to hasten the downfall of the little favorite, which was at last cut away, leaving one-half of the stem for a stake to the Rosamene, and there it remains to this day, and perhaps, the only really good worked plant of the sort and of the same age in the country.

But there are top as well as bottom suckers to be dealt with, when one is short of stocks. Many old standards, when they get hide-bound, and also some young ones that are not vigorous enough to take up the sap as fast as it comes to them, cause the stock to push out a strong shoot or two just below where the top was budded on; and nine persons out of ten snap these off as soon as they see them, this is a very bad practice. What they cut them off for is, as they say, because they rob the lawful head of a portion of the sap which flows to their own wild, luxuriant leaves: a plausible theory, certainly, but it is founded in error, and it is most certainly against the laws of nature to cut out such suckers at all the first season, and more so, if the head has been languishing the past year or two. The right way to deal with wildings issuing from just below the head of a standard rose, is to see that they do not get above the head, this is prevented by stopping them. There is no question about these shoots being able to rob the head, and ultimately to kill it, perhaps, if they were allowed to grow on in their own way; but it is equally true that, in a few months, two or three wild shoots, if not allowed to gain more strength than those forming the head, would be capable of renovating the health and strength of both stem and head of an unhealthy rose-tree. Practice, in a thousand instances, has proved this theory

to be the true solution of what we gardeners call "robber-shoots," and few things can be more easily explained than how all this is brought about.

Take a standard rose of any age or size in any garden, and unless the head is one of the climbing sorts, or what we call weeping roses, it is two to one if the stem is healthy. A dog rose will fight its way in a rough hedge for twenty years, and be the most vigorous plant, in spite of all opposition from neighboring trees; the same planted in a rich flower garden, without a twig to dispute its sway, would grow away in that time to double or treble the size and strength of the one in the hedge, provided that it was allowed to have its own way, and was never pruned or disturbed. This is its nature; and no sooner do we cut its head off, and put on a less vigorous one, than the natural law of its growth is violated; the new head can not appropriate all the sap which is natural for the roots and stems to provide, and sooner or later the stem gets hard and dry, or hide-bound, and thus a sure foundation is laid for the future attacks of insects, disease, and all the other incidents peculiar to a bad rose season.

It is not, however, for the purpose of explaining more particularly, on this occasion, how all this is brought about, that I have mentioned the subject, but to tell of the way in which I have myself dealt with rose-trees having a propensity for breaking out into top suckers, either from the wild stock, or from the collar of the union where the first bud was inserted; for I look on both kinds of shoots as proceeding from the same cause—the pent up energy of the flowing sap, through some defect in the head. Let us take the wild shoot to illustrate my meaning: to rub it off with a view of sending more sap or strength into the head, is just the reverse of the good intention; you might just as well open a canal or railroad to an old out-of-the-way town to increase its traffic, and then lock up the passage. My plan to keep the road in a thrifty state, is to build a new town at the end of the passage, and let the old one take its chance.

I would bud the wild shoot by all means, and never stop it till October, even if I used the bud from the old head itself. By the end of the season the wild shoot will have made a direct and free passage between itself and the roots—a free communication between the

extremities, which had been wanting for years past. Next winter the wild shoot should be cut three inches above the bud in the usual way, the old head should be left entirely unpruned, so as to receive as much as it could of the rising sap, until such time as the new bud had expanded into a fresh head, capable of drawing all that the roots could muster for its wants. I have seen so much of the renovating effects of this plan on roses and other plants, that had I never heard of such a thing as vegetable physiology at all, I could lay it down as a sound theory, that robber-shoots from the upper part of the plant were occasioned by some stoppage of the sap in the neighboring parts; that in certain cases, as in that of the rose-tree, it is best to let the thief rob away to the end of the season, but in other cases, as when the adjoining shoots are to be cared for in another season, the surest way is to stop the luxuriant shoot as soon as it has made a dozen or so of leaves; and that in neither case should the strong shoot be rubbed-off until the season's growth was ripe and finished, and for this simple reason, that the shoot itself, or rather let us say, the formation of it, can only open an upward passage; that two distinct passages are essential to a perfect circulation in plants, and that the leaves only, *and leaves of a right age too*, are capable of opening a *downward* passage. Therefore it follows, that rubbing-off these strong shoots can not tend to any good, and may cause a good deal of harm.

On the other hand, strong suckers from the bottom of a rose, or any other plant, can never add to the strength, but the contrary, and such ought always to be removed; further, side shoots almost always issue from newly planted rose sticks, because the head is so much cut-in that it can not appropriate all the rising sap which must overflow, as it were, in these side shoots. It is very foolish, therefore, to rub off these lateral openings, because that can only bring the circulation—I mean the upward move—to a dead stand. It would be equally improper to let the side shoots grow away as they choose, because the whole strength or sap from below might flow into them at the expense of the upper parts—hence it follows again, as we must not rub them off, nor allow them to grow onward, the only course left for us, is to *stop* them, and that is most certainly the true method; but it does not matter much whether we stop them

at the fourth, sixth, or tenth leaf—anything between these will do just as well.

It is customary with all of us gardeners, nurserymen and all, to stop, or cut-back a little, the wild shoots on a rose-tree as soon as the buds have taken, as we say: for two reasons; to keep the wild heads within bounds, so that we can get among them, if we wish; and by cutting them short, their own weight, "when stormy winds do blow," will not cause them to snap off just at the top of the inserted bud, which they often do at the point where the cross cut was made to let in the bud. Now the two reasons are very good, but the plan itself in just the reverse; and although we think very little of it, it is not too much to say, that nine-tenths of all the diseases incident to standard roses take their origin from these very outs.

According to the strict laws of vegetable growth, so far as we understand them, rose shoots, that are budded after this time, should not be cut before the end of September, and all of them should then be cut to different lengths from the bud, according to their strength, or say from four inches to a foot; but if the buds have grown, as all perpetuals are sure to be, if budded early, the wild shoots ought to be stopped, *but not cut back*—as soon as the shoot is six inches long. By merely breaking off the point of the wilding you stop the onward flow in that direction, which must then run into the next open channel which is in the young shoot from your bud.

By cutting-back the wild shoot to near the budded part, before the new shoot itself is strong enough, causes a stagnation in the flow; and here is the key to the whole story, and and which the youngest tyro who reads this letter may prove in one week. He may go to the nearest bush or tree, select a wilding, or any stout shoot of this season's growth, and if it is two feet long, let him cut off sixteen inches: that is, cut off two-thirds of its length, which is about equivalent to our term "cut-back;" then after a few days let him try and bud on the stump, and if the bark will rise, I shall never be a philosopher. But, apart from reasoning and physiology, whoever will take my advice, and plant a bed of the *Geant des Battailles* rose, let him or her be further advised, and plant a row or ring round it of the rose *Souvenir de la Malmaison*.

Cottage Gardener.

WATERING.

THE superior manner in which many plants are grown in cottage windows, is generally owing to the treatment they receive from the female branches of the family. Simple though it seem, the mode of applying the water-pail has more to do with success, and the want of it, than is dreamed of in the philosophy of the take-it-easy folks. If examined and looked into, four out of every five cases of death and disease among plants, where the attendant circumstances necessary to health are come-at-able, are owing to an improper use of the water-pail.

In places of any magnitude, where the gardener can not pot and water everything himself, he is in this respect, to a great extent, at the mercy of his assistants. Good talents they may possess, studious they may be, regular in their habits, young philosophers in their lodgings; for without something of these, respectable men would scarcely employ them. But with all these omens of hopefulness, as presages and signs of the bright day coming, the most experienced among them will be the first to allow, that simple though it seems, nothing requires more judgment and experience than watering a plant when it wants it, and passing it over when it requires no supply of moisture. The rule has often been given, and the reasons for that rule fully explained, "*water a plant thoroughly when it needs it.*" Let the moisture reach every rootlet fiber; then wait patiently until your services are again required, and then repeat a similar application. The mode of applying the water must be regulated by the nature and circumstances of the plants. Thus, for tender and small plants, we would use a fineish rose, or a spout applied very gently, covering the surface of the pot with water, as nearly as possible in a horizontal position; the finer the soil, and the finer the rootlets, the more indispensable would this appear. Again, for larger plants, coarser soil, and larger rooting things, we would use a coarser rose, or send the water from the spout of the pot upon a tile or potsherd laid on the surface, to prevent the soil being torn up into fissures and gulleys. But look now, and behold this specimen of a rose-waterer, which we hope, ere long will constitute a curiosity in an anti-quary's museum; though not so very long

since, he and such as he, might have been studded in rows by the dozen. He has a great aversion to using the spout, or even a large pierced rose, on any occasion. He has been told, and quite rightly we admit, that the finer the drops of water, the more atmospheric air will a certain quantity carry down into the soil, and among the roots of plants. It is quite a treat to observe the *gusto* with which he watches the descending dew-drops, though you may note that blinded by his transcendentalism, he sees not, that by never moving his hand, these drops, however small, are making, where they fall, a hole in the soil, upon the principle that the dropping fluid wears away the hardest rock,—thus providing not only for an under exposure of rootlets, but next to guarantying that one side of the pot shall receive a better supply of water than the other; and not only so, but the very *time* required for watering large vigorous plants with such a fine pierced rose, allowing that the waterer is quite aware of what he is about, is apt to make him pass by such large specimens with an undue supply, and the consequence is, that with two or three inches of wet soil on the surface, the rest of that in the pot, as well as the roots, might as well have been in the deserts of Libya, as honored and petted in a green-house or window. On the other hand, there is that reckless, dashing, spout-watering gentleman; stand pondering over the droppings from that dewy rose!—No, not he; dispatch is the order of the day. Except for things in which he may feel a spice of enthusiasm, you might imagine the railway whistle was ever vibrating in his ear. Be the pot large or small, long potted or fresh potted, the plant rough or smooth, strong or tender, possessed of thick fleshy roots, or fibers finer than a lady's hair,—with straight back, and head erect, and spout of pot from twelve to thirty inches from the soil, down descends the liquid stream, like a jerked avalanche from the Alps, or a runaway streamlet from Niagara. True, the soil may be tossed out, and made to adorn the sides of pots lately fresh washed; holes may be made as if a plow-share had been sporting: hard, firm, compact balls may stand little chance of receiving a suitable supply like their later potted, freer absorbing brethren. The force of the stream

against the stem of many hard wooded plants, especially after a hot day, and when the water is rather cool, may promote such gangrene and disease, that the green flourishing plant of the morning may be withered and dried up before the evening. But what reck he? A little more care, even *with the spout*, a stooping position, gently running the water over the surface of the soil, or even pouring it upon a piece of tile or oyster-shell, would prevent many of these contingencies, which he is ever ready to ascribe to soil, to situation, to sun, to each and everything, but the gallant use of the water pail.

One word more. If we professionals make such slips, ought we not to excuse many of the shortcomings of our amateur friends? Some time ago, I was asked what could be the matter with some window plants that certainly looked rather queer. The soil on the surface of the pots was moist; there was water in the saucers on which they stood; they had been regularly supplied as they got dry, both top and bottom, for several months, and still they flourished not! and what could be the matter? It was elicited that a little water was generally first put into the *saucer*, and then a little into the pot; because a great man had said that if water was communicated below, it would be drawn up by capillary attraction. Here was a gleam of light; catching the pot in hand, its *lightness* unraveled the mystery. Turning the plant out of the pot was the work of a moment; it had been well and openly drained, but the roots had not got to the bottom, and of capillary action upward, therefore, there was little;

about one inch on the surface of the soil was moist enough, the middle parts might have been baked in an oven. The moistness of the surface prevented, to a great extent, any benefit being derived from the moisture in the saucer. The pots were plunged in water, to give them a perfect soaking; afterward when getting dry, they were watered on the surface until the water ran out below; and if such came, it was thrown away, leaving none to stand above the drainage; and healthy, nice flowering plants were the consequence. If there is such a thing as teaching by example, then these ideas may be worth the paper on which they are printed.

Cottage Gardener.

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WATERING.—You ask if and why “it is injurious to water during hot sunshine?” and we reply that it is injurious, because it excites the roots to increased absorption, and consequently, the leaves to increased transpiration of moisture; then immediately after, the surface of the earth becomes caked, and the root moisture is evaporated; yet the excited leaves go on with their increased transpiring, and flag and parch worse than before. Naturally, abundance of water in the form of rain, never comes to the roots of plants, except when the air is saturated with moisture, so that though there is an increase of water to the roots, less is given off by the leaves. To imitate this dictate of nature as nearly as possible, gardeners give water of an evening, just as they are closing their glass, for this secures a damp atmosphere at the same time.—*Id.*

THE CALCEOLARIA.

FIRST, let us offer a few words upon their characteristics of excellence. *Form*—this is the most important of all. If a flower have every other property in the highest degree, and be deficient in form, it is of no use as a show flower. It should be a complete circle, without any indentation on the edges; the upper part should rise well up, so as almost to hide the throat; this should be small. The cowl or head should be of a medium size, neither too small, nor too large, but well proportioned: it must not stand so high as to destroy the general circle of the whole flower. The size should be not less than one inch in

diameter. The *colors* should be clear and distinct; if a blotch is in the center, the ground color should surround it equally all round. The blotch should never run down to the edge at the lower part. If the flower is a spotted variety, the spots should be well defined. If gathered in a circle in the center of the flower, with the ground color running in a broad ring round the spots, the variety will be the more perfect and valuable; but this is not indispensable,—the spots, if well defined, may cover the whole surface of the flower. The *plant* should have large, healthy leaves, covering the surface of the pot, and

rising up among the flower stems. Florists should aim at obtaining varieties with shrubby stems. Unfortunately hitherto, the best varieties are of the herbaceous class, as it is termed, and these are more difficult to keep and propagate than the shrubby varieties. This might be overcome by impregnating the shrubby varieties with herbaceous ones, and so obtain a more hardy progeny.

Propagation: by seed.—Save this from such as have been impregnated in the manner hinted at above. The best time to sow it is in June. If sown earlier, the plants will be apt to show bloom in the autumn, and will thereby be much weakened; if sown later, they will be too weak to pass safely through the winter. Sow them in wide shallow pots, in a rich, light compost of loam, and well decomposed leaf mold; sift the portion on the surface through a fine sieve; drain the pot well; level the surface with a flat smooth piece of wood, and sow the seed rather thinly. If sown thick, they are liable to damp off. Cover the seed as thinly as possible, and water with the finest rosed syringe, or water-pot, allowing the water to fall on the soil almost like a shower of dew. If the soil be very dry, it is desirable to give it a gentle watering before sowing and covering the seed: place the seed-pans on a shelf near the glass, shading them from hot sunshine. Give water whenever the surface appears dry, using the same fine rosed syringe, or pot. The seeds, if good, will soon grow; and when the plants are fairly above ground, allow them more air and light; keep them just moist enough to prevent flagging. As soon as they are large enough to handle, transplant them into the same kind of pots; shade again for a time until fresh roots are formed, to enable the plants to bear the full light. They will, with moderate supplies of water, grow freely, and will soon require potting off singly into small pots. They will grow best after this potting, in a cold frame, set upon coal ashes pretty close to the glass.

Cuttings.—When the seedlings are in flower, select such as possess the desirable properties described above; mark and name them, and describe them in the book kept for that purpose. After the bloom is over, or sooner if an early increase is desired, cut down the flower stems, to allow the plants to produce cuttings. Take these off as soon as they are three inches long, reduce the leaves

to two or three, according to the strength of the cutting; cut off the lower leaves with a very sharp knife, and let the cuttings lie exposed to the light, but not to the sun, for an hour, to dry the ends and wounds made by cutting off the leaves. While that is taking place, prepare the cutting pots. First fill them half full of broken crocks, or potsberds, then place a thin covering of moss upon them to prevent the soil from choking up the drainage; after that fill the pots with light compost, formed with fibrous light loam two parts, and well decomposed leaf mold one part, adding a liberal amount of silver sand; cover this with about half an inch of the pure silver sand, give a gentle watering to make it firm, and allow it to stand a short time to dry the surface. Then if the hour has expired, plant the cuttings round the edges of each pot, but not too thickly; one inch at least, should be between each cutting.

Situation of the Cuttings.—The propagating house, where there is such a convenience, is of-course the right place for them. At Pine-Apple Place, we have one built on the best principle, with a tank for bottom heat, and pipes to cause a dry atmosphere. Within this house there are small frames covered with glass, set on a bed of ashes over the tanks. Within these frames the cuttings are placed, and in such a quiet moist atmosphere, they strike astonishingly quickly. But every one desirous of propagating Calceolarias, may not have such an excellent convenience; they need not however despair, but may place the cuttings in a cool frame, and cover them within the frame with a hand-light. To prevent their damping off, cover the surface upon which the cutting posts stand, with dry coal ashes. This will absorb the extra moisture, and keep the damp from injuring the foliage. If this convenience is not at hand, place the cuttings under hand-lights in the green-house itself, shading them effectually and closely at first, till they show symptoms of growth, when a little air may be given, and less shade used. Cuttings may be struck even in the open air under hand-glasses; but this is rather an uncertain mode, and only to be followed when no other convenience can be had. Directly they have formed roots, pot them off singly into small pots; keep them close for a few days till fresh roots are formed, when they should be gradually hardened off.

Cottage Gardener.

Pomology.

THE BEST PEARS.

Bloodgood.—A capital pear, of the first quality. The tree grows well; bears abundantly; the fruit of small medium size; yellow russet in color; juicy and high flavored. My earliest pear so far.

French Jargonelle.—Nearly as early as the last. The tree a rampant vigorous grower. The fruit is beautiful to the eye, but worthless to the taste—not worth growing. It has borne with me several years.

Bartlett.—Perfect in all the qualities that have ever been attributed to it. It follows close upon the Bloodgood in ripening, and is perhaps the most profitable pear of the season, when one has a near and ready market. The Bartlett is a vigorous grower, and a great bearer; and may, by proper care, be kept in eating two or three weeks—but if overkept is worthless.

Louis Bonne de Jersey.—A first quality pear in all respects. The tree is a vigorous upright grower, and a great bearer. The fruit is beautiful to the eye; large, juicy, rich and melting. One can scarcely grow too many of them.

White Doyenne, or *Virgalieu*.—This world-renowned pear it is not necessary here to discuss. It grows all over western New York, where the blight does not kill it, in its fullest perfection, with an occasional exception of spotting and cracking. It can not be too widely cultivated where its fruit grows perfect.

Marie Louise.—This pear has stood in my grounds a dozen years, and in only two years of the seven or eight of its bearing—the first and the last—has the fruit been really good. Last season it was almost equal to the Virgalieu; large, melting, sweet, and delicious. It is a careless, slovenly grower; writhing and twisting its branches in all sorts of ways. Yet it is a good bearer. Were I to plant again it should not be in my collection.

Brown Beurre.—It is somewhat variable, owing to position and cultivation; but with a warm, rich, heavy soil, and good care, it is almost always good; and when good, so very delicious to the taste, in its melting vinous flavor, that an occasional delinquency may be

excused. Yet the largest and finest Brown Beurre I have ever seen grew on trees in my neighborhood, which stand on a very heavy, stiff, clay loam—but rich—with no cultivation at all, except what a careless plowing gives them, and what trimming they get by the cattle browsing upon them in the winter. There is something queer about that. Possibly it is the best way to treat them; but I can not make up my mind to serve my trees so.

Stevens' Genesee.—This should have followed the Bartlett in succession of ripening. It is a capital pear in the growth of its wood, its hardness and full bearing properties. Of only second quality in flavor, when compared with the Virgalieu or Louis Bonne de Jersey. It is all, in excellence, that has been claimed for it.

Van Mon's Leon le Clerc.—From what I have seen and what I had heard of this pear from observing men, I fear that those who built high hopes in regard to it, from the triumphant tones with which it entered the United States, will be disappointed. It bore with me last year, on a thrifty young tree, from grafts which I obtained of Mr. Charles Downing, and which, I have no doubt, are genuine. The fruit cracked and spotted before it was half matured, which caused it to grow out of shape; and the flavor, when I gathered and ripened it, amounted to nothing. I have also seen it at the exhibitions. I shall not propagate it.

Duchess d'Angoulême.—Not satisfactory on the pear stock; but good on the quince. It is a noble looking, great coarse fruit, of tolerable flavor, fair second quality. It will do to sell to those who judge of pears by their size and appearance. For preserving they are grand. They should be grown only on quince stocks, and then, near to the ground, that the wind may not dislodge them, which it will be quite apt to do, if suffered to grow.

Seckel.—It is hardly worth while to talk about the Seckel—the highest flavored pear known. This is probably the most northern latitude in which it will grow; and in favorable seasons it is as highly flavored, and as

well grown in western New York, as in the neighborhood of Philadelphia, its native soil. I have nowhere seen it larger and better flavored than here.

Winter Nelis.—I hardly know what to say about this pear. I have fruited it for the past three years. It is a *mean* grower—to use common language—with small, twisting, and *tumbling* spray; yet after a while, the limbs shoot up into respectable shape, and may make a top, by and by. The tree bears well; is a thrifty grower and the fruit of medium size, juicy, vinous and good. Better on quince stocks than on pear—so I have found it. Is not this a queer sport of nature that some kinds of pears should be better on the quince—a low, scrubby, acrid, fruit bearing thing—than on the pear stock itself?

I fancy that we in America have not yet arrived at the end of all wisdom in pears. We have a good deal to learn. Another thing; I have doubts whether our late importations from abroad, in those extensive varieties which our amateurs and nursery-men are introducing, are to do us much good.—Most of these foreign pears are too “high bred.” Compare them with the best of American origin, and see how infinitely inferior they are in hardihood and growth; and in flavor they do not excel, if they even equal, our *best*. Still, where we are lacking in American pears of the requisite flavor, for their season I would adopt the foreign ones; but *these qualities equal*, commend me to the native.

We are also running after too many kinds. What is the use of bothering one's brains after fifty or a hundred or five hundred things merely for variety's sake, when perhaps a dozen or twenty will comprise all that can be got in the five hundred? At a rough dash, I will name a dozen pears which will give you all the excellence you can get out of the entire pear family in the circle of their seasons for ripening, for this locality—say western New York: Bloodgood, Bartlett, Steven's Genessee, White Doyenne, Gray Doyenne, Louis Bonne de Jersey, Brown Beurre, Seckel, Vicar of Winkfield, Beurre d'Arenberg, my Nonesuch, or Glut Morceau, Winter Nelis, and for baking and preserving, the Orange Bergamont.—*L. F. Allen, in Horticulturist.*

The Old Michigan Pear-Trees.

We find in the last number of the Horticulturist, some remarks by W. Adair, of

Detroit, on these old, venerated trees. In reference to the blight he says:

“In this vicinity there is nothing of the blight known, and we are told that ‘where ignorance is bliss, ’twere folly to be wise.’ The old pear-trees line the banks of the river several miles, both above and below the city, and are still as healthy and vigorous as the native trees in the forest; and notwithstanding their immense size, being fifty or sixty feet high, and from two to three feet in diameter, they are sound and solid to the heart, bearing regularly and well. *One hundred and twenty bushels have been gathered from a single tree in a season.* The fruit is not of the first quality, still it is very good, where there is little better to be had, and sells readily from four to six shillings per bushels. It most nearly resembles the Early Crawford, [Catherine? Ed.] than any other variety with which I am acquainted, and there is but very little difference in the quality of the fruit, among the old pear-trees around Detroit.

It is worthy of notice that all the old and magnificent specimens of the pear-tree, that have attracted so much attention among horticulturists, stand near the bank of the river, so that their situation is never wet, although the soil is very retentive of moisture, (being mostly a heavy black loam, from nine inches to a foot deep, with a stiff yellow clay sub-soil.) Perhaps this may be accounted for by the settlers at that early period locating on the immediate banks of the river, which is evident from the shape of the farms, being only narrow strips, about eighty rods wide, and running back three miles, all considering it important to have a front on the river. By such an arrangement, each would have their fishing ground, and would also be better able to protect themselves from any incursion of the Indians.”

Some of these trees are now—last of May—in bloom, a perfect mass of flowers, and show every appearance of affording an abundant crop.—*Prairie Farmer.*

The Orchard Caterpillar.

In the Farmer of the 14th ult., I noticed an article on the orchard caterpillar, by H., of Bedford. His history of the spring caterpillars which feed upon the apple and cherry-tree—or rather upon the leaves of these trees—is quite correct. They are a very different

insect from the summer or web caterpillars, that have become so abundant within a few years past. The elm, ash, cherry, and many other kinds of trees, besides the apple, were disfigured by their large webs the past season. The eggs from which the spring or early caterpillars are hatched, are deposited by a miller or moth "transformed by a caterpillar." The eggs are placed around the limbs or twigs, forming a kind of ring or bracelet; this ring consists of three or four hundred eggs, in the form of short cylinders, standing on their ends, close together, and covered with a thick coat of brown varnish. They remain in a dormant state from the time they are deposited by the winged moth in July or August, till about the time of unfolding of the apple and cherry leaf in the latter part of April or beginning of May. They continue in the caterpillar state about seven weeks. Their habits, ravages, and the unsightly appearance of their nests, are so generally understood, that nothing further need be said upon these points. Many of the eggs can be removed from the lower limbs of the trees by searching for them in the winter, or early in the spring. Those who escape and hatch out, should be destroyed as soon as the nests are seen. For this purpose a spiral brush is the most effective instrument I have used for ridding my trees of these "useless intruders." A mullen head tied to a pole, answers as a substitute for the brush; its rough surface readily winds up the silky nest with its occupants, and they are easily crushed.

Going over an orchard two or three times in this way with the brush, will rid it of the spring caterpillar. The summer, or web caterpillars are hatched from eggs laid by the parent moth, (a winged insect,) in a cluster upon a leaf near the extremity of a limb. They are hatched from the last of June to the middle of August, some broods being earlier and others later. The young caterpillars immediately begin to provide a shelter for themselves by covering the upper side of the leaf with a web, which is the result of the united labors of the whole brood. As they increase in size, they enlarge the web. Thus they go on increasing the size of the web, devouring only the upper skin and upper portion of the leaf, leaving the veins and lower skin of the leaf untouched. Toward the end of August, and during the month of September, they leave the trees and disperse, wandering about

till they find suitable places for shelter and concealment. Here they wind their cocoons, and remain through the winter. In the months of June and July they are transformed into moths. These moths are white and without spots; their fore thighs are tawny yellow, their feet blackish. Their wings expand one and a quarter inch. The only time we can attempt to exterminate these destructive insects with any prospect of success, is when they are young, and first beginning to form their webs on the trees. So soon, then, as the webs appear on the extremities of their branches, they should be cut or stripped off, and be crushed under foot. The cabbage butterfly, the black squash bug, and many other insects, deposit their eggs upon the under side of the leaf, similar to the parent of the caterpillar above described.

Granite Farmer.

Fruit Room.

My fruits are keeping admirably in the new fruit room.

The walls are filled-in with charcoal and sawdust.

The Beurre Diel, Vicar of Winkfield, Excellentissima, and other autumn pears are now (January) in as perfect condition as when gathered from the trees, and so they will remain till the warm weather of spring approaches. I shall then try some of them in the non-conducting boxes, where I think they may be kept till summer. I have, by a similar process, preserved some varieties till July. All that is necessary, is to obtain a low temperature during the warm weather of autumn and to preserve this equilibrium. This being attained, there is no difficulty whatever.—When the severe weather of last month occurred, my fruits were removed from the shelves and packed in boxes; with a thin layer of clean rye straw between each tier, the tubes of the straw containing air enough to correct mildew and damp. The boxes are now piled on one side of the room, and covered with hay about three feet in depth.

My experiment was suggested by the bad effects of moisture and warmth in my old fruit cellars, under my dwelling-house, and the same difficulty exists with rooms on the ground-floor of buildings. I therefore resort to the other extreme—a cool and dry chamber on the north end of my barn, over the carriage room. I am now quite satisfied that we have at last

ascertained the proper location for a fruit room; namely, a cool, upper apartment, with lined non-conducting walls.

M. P. Wilder, in Horticulturist.

Fruit Depredators.

Orchard Caterpillars.—These devastating creatures do not generally receive that marked attention which is their due. An orchard infested with them, not only presents a most unsightly appearance, but is often very severely injured by their ravages. If let alone, a single nest of them will eat off the leaves from several branches, and sometimes from a good portion of the tree. The leaves of trees and plants perform an important office in vegetable economy, as any one can very easily convince himself by removing them all from a small tree or plant. We once came near ruining a fine graft by excessive pruning. The leaves absorb the gases from the atmosphere and convert them into nourishing food for the plant itself. They also exhale oxygen, and because of this inspiration and respiration of gases, they have been termed the lungs of plants. The evil then of having the leaves removed from a well pruned orchard is very great.

The caterpillar is easily destroyed. A swab on the end of a pole, and some good strong soapsuds, are all that is required. Wash out, thoroughly, whenever a nest becomes visible, and you will have but little trouble with caterpillars. They are all in their nests at sundown, and seldom leave before sunrise in the morning, and this is the time to attack them.

The Curculio.—The dreadful havoc which this insect makes with the plum, requires that extensive observations should be made, to ascertain its habits and character, that an effectual remedy may be discovered. At present, Mr. David Thomas' plan of giving the tree a sudden and heavy jar, which will cause the insects to fall from the tree upon sheets spread beneath, is the most effectual. A thousand other plans have been tried, but the results show that it will not do to trust them. Of late some one has advanced the idea that the curculio crawls up the body of the tree, to reach the fruit; and reasoning from this, has concluded that a lead trough wound tightly around the tree and filled with oil, would entrap them on their passage up. A large number were caught by this means.

Later still, we see it recommended to wreath about the tree two or three rings of glazed wadding, such as is used for garments, and for packing grapes in, leaving the lower edge projecting two inches from the tree. The insects in crawling up accumulate underneath the wadding, which they can not pass, and may then be destroyed.

The jarring process is performed by sawing off a small branch near the body, and striking upon this with a good sound mallet. This operation must be commenced as soon as the fruit is the size of a pea, and continued as long as a single curculio can be found. The speediest method of destroying them after falling upon the sheets, is to shake them into a pail of hot water. Don't neglect the matter, friends, if you desire to save your plums.

Michigan Farmer.

ENEMY OF THE PEACH.—Among the other things which blight the prospects of peach growers is a small, green grasshopper, that lives upon the leaves, eating small round holes, from August until the first heavy frost. They commence a cricketlike noise after sun set and continue through the night.

The female punctures the young bark with a sting like a locust, and deposits a small transparent egg of an oblong shape and closes the orifice with a kind of gum from her mouth. These eggs hatch out in April, leaving a hole from which the peach gum exudes, and a small dead spot under the bark. The grub is a small white worm, somewhat resembling the common peach worm, only much smaller. Is it possible this can be the cause of the yellows in peach-trees? It is a subject worthy of investigation.—*Am. Ag.*

AUTUMN MANURING OF FRUIT TREES.—Carefully open a trench at the very ends of the roots; throw out a third of the poorest soil, and replace it with a mixture of manure and ashes. I use a cartload of manure, no matter if it is fresh,—to a bushel of ashes, and I find it never fails in bringing up the tree. If I wait till spring before I apply this stimulus, I find it to do just half as much good as if I put it in the soil in October and November. It is quite surprising how old fruit trees can be brought to, by this simple dressing of barnyard manure and ashes, applied in the fall.

Exchange.



Transactions.

THE CINCINNATI HORTICULTURAL SOCIETY.

SINCE the last Report, this Association has continued to extend its usefulness, and to diffuse much valuable information by means of the discussions which have been kept up with considerable spirit among the members. Some of these will be reported in the pages of this work, as heretofore. In the previous month, when discussing the best modes of growing Asparagus, a question arose as to the best methods of cooking this vegetable. Some choice specimens from beds which had been subjected to different modes of treatment, were referred to a committee, who rendered, as the result of its labor, the following

REPORT.

To the Cincinnati Horticultural Society.

The Committee to whom was referred the specimens of Asparagus, on Saturday last, respectfully reports:

That, although possessing that confidence in his own taste and judgment which characterizes most of those who have the honor of belonging to this Society, as well as the outside barbarians who have not displayed so much of those qualities as to have aspired to that honor, yet he considered that "a decent respect for the opinions of mankind" required him to call to his assistance the talents and taste of some other competent judges of culinary vegetables. For this purpose he applied to our President, to a member of the Council, and to an eminent citizen, distinguished for his judicial acumen; but failed signally in all his efforts to obtain the required aid. Under these discouraging circumstances, however, he determined not to fail in his duty, but to discharge it solitary and alone, except so far as he might be aided by his own family; and, at the proper time and place, he proceeded to attempt the solution of the problem involved in the duty assigned him, namely, whether green Asparagus, as exhibited by Mr. Orange, of Mount Harrison, or white, as exhibited by Mr. Bush, of Covington, was best suited to fulfill the wishes and hopes of those who desire to see some improvement in the quality of this delicious vegetable, when exhibited in our market; and the additional problem, whether Ohio or Kentucky is entitled to the palm of excellence in its cultivation.

Agreeably to the directions of Mr. Bush, his specimen was put into cold water and heated to the boiling point. One-half of Mr. Orange's specimen was cooked in the same manner; the other half was put into boiling water with a little pearl ash, and at the proper time they were served up, *secundum artem*, and subjected to the usual tests for such cases. The application of these tests gave your committee additional cause of regret for the disappointment in not having obtained the aid he had sought, since both specimens were found to be so delicious as to deserve that their merits should be proclaimed by higher talents than those of "the humble individual" who now addresses you.

Your committee, at the time of the reference to him, confessed that he was sensible of the existence of a

prejudice in his own mind in favor of green Asparagus; but he endeavored to guard himself as far as possible from the influence of that prejudice in giving his judgment; and if he had obtained the aid he sought, would have had it balanced by an equal prejudice in favor of the white.

As it was, however, notwithstanding his previous determination to give the benefit of any doubt to our neighbor of Kentucky, he felt bound to render his verdict in favor of the green; not, however, without bearing testimony to the excellent qualities of the white, and requesting the competitors to give the Society—each of them—a detail of the course of proceeding in the cultivation of this vegetable, which has produced such favorable results—results honorable to the horticultural skill and talents of Kentucky and Ohio alike, and indicative of progress in civilization and good taste, and, consequently, of increased attention to the science and arts of Horticulture.

All of which is respectfully submitted.

J. P. FOOTE, Committee.

Upon several occasions the conversations have been directed to the effects of the frosts; many interesting illustrations have been brought forward, and some curious hypotheses advanced; but, alas! little new light is shed upon the questions respecting the recurrence of these depressions of temperature, and why some localities should prove to be more obnoxious to them than others. Much food for thought has, however, been disseminated by the reported observations, which will serve to cause others to observe with greater care, and, it is to be hoped, with a better result, in coming seasons.

The poor prospect for a crop of strawberries was early noticed, and its causes discussed. This again introduced to the notice of members the new doctrine of a necessity for artificial, or at least, *medial* impregnation of the blossoms, which was again urged upon the attention of vegetable physiologists. There was an honest difference of opinion; but the suggestions made by correspondent "Duster," in last year's volume of the Review, appeared to be gaining in favor.

Mr. Longworth, when he exhibited his fine specimens of early forced strawberries, of a stamens bearing, or hermaphrodite kind, to wit: Longworth's Prolific, or Schneicke's Male, stated that the flowers had been artificially impregnated with a camel's hair pencil, and that the same plants had failed to set their fruit the previous year, when this was neglected—they flowering at a season when there were no insects in the forcing house. The crop in the open air, it will be recollected, was much injured from a similar cause, last year; this season, with favorable weather, we have fine fruit, but a very much reduced quantity.

When discussing the prospect for Strawberries, Mr. Carter reported that there would not be a half crop. This arose from want of blossoms; but those which did appear have set well, and will be fine—the old

plants had died out, and the young ones did not appear to have force enough to blossom.

Mr. Buchanan set out a new bed of our own seedlings, this spring, which were blooming and setting fruit finely. Mr. McAvoy, who furnished them, said they were nearly all choice, strong plants, selected on purpose.

Dr. Mosher did not find one plant in five with blossoms, but thought that it was attributable to the dry fall, and not at all to the winter.

Mr. Petcolas, in confirmation of a remark by M. Kelly, stated that Hovey's seedling had scarcely a blossom, but that Jenney's seedling was bearing well.

A. H. Ernst said the same thing of Hovey's seedling. This was confirmed by others.

Dr. Mosher apprehended that this variety would run out by dying away, and urged the members to nurse it with care, that they may preserve it.

Mr. Ernst observed that the "Garden of Eden seedlings" had appeared more hardy than other kinds, and had stronger roots, which raised them much in his estimation.

Now, as a matter of fact, the result of observations made at our Horticultural displays, and daily in the markets, all will admit that the supply of this delicious fruit has been very deficient—the berries have been fine and fair, but the quantity falls far short of the usual supply "for the million" that has been heretofore found in this city; for which abundance, indeed, it has been somewhat notable.

After the reading of the paper on Cauliflower, to be found on page 421, the following remarks were made in the meeting:

Mr. McAvoy, in support of his paper, said that his success depended mainly upon not sowing his seeds too soon, and because he had sufficient depth of soil in the hotbed, and had watered the plants well.

Mr. Buchanan set out his plants like cabbages, in good soil, and treated them in the same way, but not more than half produced flowers.

Dr. Mosher had made several attempts, first with the early sorts, started in hotbeds. They bloomed in midsummer; hence were worthless, owing to the drought. He tried late kinds: one in four, only, produced heads. He had taken the plants into a dark cellar—planted them there late—watered occasionally, and had found fine heads in February.

Mr. Longworth had never seen them come out well in the summer, the weather was too hot and dry.

Mr. Foote concurred, and referred to the fine crops produced about Boston, where it was cooler and more humid.

Mr. Ives had left some Purple Cape Brocoli out of doors all winter; they were set close together in the fall, on a rich border, planted deeply, and furnished fine heads in the spring, in May.

Mr. Orange suggested root pruning or loosening, by pulling up the plants gently, when they were too leafy, as a means of forcing them to blossom.

Mr. Davis recommended planting them in a trench, like celery, and earthing up gradually, to preserve the moisture.

The Report of the Spring Exhibition of Green-House Plants, has already been published; but a tribute has since been rendered to the valuable aid received from some of the female members of the society. Silver cups have been ordered for Mesdames Heaver and McAvoy, who then, as heretofore, especially manifested a deep interest in the success of the society.

The Chairman of the Council made the following

REPORT.

To the Members of the Horticultural Society.

The Council has been called upon to make a report of the late Floral Exhibition. On Saturday last the Chairman handed in an account of receipts and ex-

penses, and showed a balance in favor of the society. The Council and those employed, used all the economy they possibly could, and are satisfied with the charges made by those who assisted.

They were also gratified to meet and see so many smiling faces, and such general good feeling as prevailed during their attendance. Our friends Jackson, Heaver, Sayers, Longworth, and others, made their usual display of fine Tropical and other plants; and Mr. Pfeiffer, for the first time, spread a table of choice Plants, Roses, cut Tulips, etc.

We regretted, however, to miss several of our old friends and members whose green-houses have hitherto been emptied of their valuable contents to aid the good cause. The inquiries were often made: Where are they? Why don't they come? The only excuse we could make, was: They have been to the World's Fair, and they are tired of show and excitement, and need rest. But by the Fall Exhibition, they, as well as the choice plants which they have brought on, will, we hope, be recovered, and will enter the lists with renewed vigor as competitors, to distribute the knowledge and experience they have gained in the Old World, to their less fortunate fellow-members.

We were sorry to see so small a show of Vegetables, while our markets at the same time were as well supplied for the season as any other east or west of the mountains. But, unfortunately, we have few members who are altogether practical vegetable gardeners. Is it that the fee of admission is too high? or that they believe us only amateurs, and that they will gain nothing by joining our Society?

We strongly recommend our members who are acquainted with these useful cultivators of the soil—many of whom are Germans—to bring them forward; and as an inducement to them or others, we propose that a fund be raised to relieve any member who may need aid in sickness or other trouble, and each member pay from fifty cents to one dollar, yearly. A sufficient amount may be raised for that purpose, and if not needed at the end of each year, it might be used as gratuitous awards, or increase of premiums, for the encouragement of exhibitors, or for the improvement of vegetables. We think great good may thus be done to men whose occupation, requiring incessant labor, excludes them from the benefit of other societies.

We also recommend that all gardeners out of employment, whether members or not, be permitted to come to our weekly meetings and state their wants; that their names be entered, and a committee appointed to procure them work; and we hope, before another year, to take by the hand as members, many who shall have been benefited by such aid.

In looking over the books, we find a large amount of the yearly dues unpaid. Another opportunity will be given those who owe, by attending our June Exhibition; after that time we recommend that written notice be sent to each non-payer, and that their names be placed on the table every Saturday, so that all may see who are remiss. By so doing many members may see the name of his neighbor or friend, and will remind him of his forgetfulness. All should remember that the small amount they owe does not go into the pocket of office seekers, but to pay rent of rooms and prizes to those who merit them for improving the wonderful works of nature which are so bountifully bestowed upon us.

We also respectfully request the members to bring in, every Saturday, such vegetables, fruits, and flowers as they may have to spare, to remain on the table till 12 o'clock; after that time they can dispose of them as they please. This course has induced, and will again induce strangers and the ladies to visit us; their praise and smiles will urge us to emulation, and add pleasure to our exertions.

W. ORANGE,
Chairman of Council.

The first fruit was exhibited on the 22d of May, when Mr. Ernst showed the Bigarreau de Mai Cherry, Mr. H. Moore some green Gooseberries, of good size, and Mr. H. Ives the Iowa Strawberry, ripe, who was awarded the prize for the best and earliest. On the 27th, Mr. McWilliams presented some very fine and delicious Mayduke Cherries, to which was awarded a premium; and the Fruit Committee, at the same time, confirmed the judgment of last year's committee respecting the superiority of McAvoy's *Superior* Strawberry. There were several other varieties exhibited at the same time—Hudson, Hovey, Iowa, and others, among which the committee recommend McAvoy's No. 1, (pistillate,) as remarkable for its beauty of form and color; it is also very prolific and hardy.

The *June Exhibition* of STRAWBERRIES and ROSES was held on the 3d and 4th days of the month; and though great efforts were made by all parties to prepare a handsome display, and to advise the public of it, (for which latter, and their frequent kindly notices of our doings, the Society voted thanks to some of the leading newspapers,) still, the people did not find it convenient to leave their homes, and other occupations or amusements, to favor the gardeners with their approving smiles. Of this the Society do not wish to complain, but they can not help feeling a regret that so much less than their usual interest was manifested by the people in the very interesting exhibition just presented.

Though abounding in the most magnificent and most beautiful cut Flowers, this Exhibition was, however, very deficient in the abundant display of Vegetables which it was anticipated would have constituted an important feature; especially as all exclusive barriers had been broken down, throwing the competition open to all cultivators, whether members or not.

That the show of cut Flowers and Roses was highly respectable, and richly deserving of encouragement, may be inferred from the following List of Entries.

POT PLANTS.

Only a few of these were brought in, to dress the tables, but among them were some beautiful specimens. Wm. HEAVER presented:

Fuchsias—Splendens, Nonpareil, Snow Drop, Fair Rosamond, Magnificent, Lord Nelson, Mrs. E. B. Reeder, Napoleon, Admirable, Globosa, Eclipse, Pearl of England, Nymph, Serratifolia Multiflora; *Brunfelsia americana*, *Stephanotus floribundus*, *Gladiolus rubra*, *Gardenia Fortuni*, (new,) *Melocactus* ———? in bloom.

D. McAvoy: 9 *Calceolaria meteor*, 2 *Calceolaria angustifolia*, *Bletia hyacintha*, *Alyssum maritimum*, *Pyrethrum* ———? 10 *Fuchsias* var., 13 varieties of *Mathiolum media*, 4 *Heliotropes* var., *Begonia parviflora*, *Ruellia formosa*, 1 *Geranium*, 3 *Pelargoniums*.

CUT FLOWERS.

S. S. JACKSON made a fine display of *Roses*, beautifully arranged in pots of wet sand.

Hybrid Perpetual—Duchess de Montpensier, Mad'e Trudeauaux, Aricie, Auberon, Baronne Prevost, Comtesse Duchatel, Cornet, Duchesse de Nemours, Dr. Marx, Emma Dampiere, Ebene, Eugene Sue, Geant des Batailles, La Reine, Lady Fordwich, Lane, Louis Bonaparte, Madame Dameme, Madame Laffay, Marshal Soult, Marquise Bocella, Mrs. Elliott, Mrs. Jackson, Leonie Verger, Prince Albert, Prince of Wales, Princess Helen, Reine de la Guillotiere, Reine des Fleurs, Rivers, Yolande Arragon, Mogador, Blanche 4 Saisons, Gigantesque, Noel, Indigo, Stanwell.

Bourbons—Bouquet de Flore, Cornice de Seine et Marne, Dupetit Thouars, Gloire des Rosamenes, Hermosa, Jupiter, Leveson Gower, Monthly Cabbage, Philpart, Reine des Vierges, and Souvenir de la Malmaison.

Noisette, etc.—Aimee Vibert, Cora L. Barton, Cels Roi de Cramoisie.

Climbers—Ayrshire, Boursalt Inermis, B. Elegans, Baltimore Belle, Prairie Superba, and Queen.

Hardy Garden, Triumph of Geum, Bouquet Blanc, Shakspeare, Cabbage Provence, Old White, Bon Ginneure, Cerisette, Rivers' George IV., Rachel, Coquette, Fairy Parasol, Princess Adelaide Moss.

Fuchsias—8 varieties; *Verbenas*—10 varieties; *Pleoma heteromala*, *Ipomea Horsfallii*, *Periploca græca*, *Drucinnella*, *Ixora coccinea*, *Geranium Utolmschi*, *Salvia patens alba*, *Hoya carnea*, *Stigmaphyllon ciliare*.

W. HEAVER: *Roses, Perpetual*—Adele Bernard, Cornet, Augustine Mouchelet, Comte de Paris, Louis Bonaparte, Lane, Emma Dampiere, Cornet, Comte de Montalivet, Jaques Lafitte, Madame Trudeauaux, Rivers, Melonie Cornue, Clementine Duval, Earl Talbot, Mrs. Elliott, Marshal Soult, Dr. Marx, Duchesse de Nemours, Duchess of Sutherland, Baronne Prevost, Aricie, Madame Prevost, Lady Fordwich, Mrs. Cripps, Wm. Jesse, Duc d'Aumale, Prince Albert, Noel, Du Roi, Yolande Arragon; *Moss*—Princess Adelaide, Old Red, White, Prolifere, Alice Leroy, Crested; *Miscellaneous*—Watts' Celestial, Princess Augusta, Cabbage, La Indienne, Laura Davoust, Musk Cluster, Princess Helena, Ayrshire Queen, Prairie Superba, Madame Plantier, Scarlet Greville.

Verbenas—2 rich stands containing 40 varieties: Striped Eclipse, Defiance, Mad'e Gurney, St. Marguerite, Rosy Morn, Splendens, Fritz, Magnificent, Tyrian Purple, Reine du Jour, Satellite, Beauty Supreme, Seedling 13, Mrs. Sedam, Queen, Lilac Seedling, Stevensii, Crimson Seedling, Iphigene, Blanche, Bicolor Grandiflora, Favorite, Sayers' No. 6, Graciosa, Captivation, Striata, President, Union Jack, Anacreon, General Brea, Fragrance, Phidias, Buckeye Lass, Tecumseh, Rosy Purple, Exquisite, Blue Bonnet, Kittura, Fire-brand, Celestine, Sayers' No. 1; Major Ringold.

Sweet Williams, 11 varieties, double and single.

Wm. Cox: twenty varieties of Sweet Williams (*Dianthus barbatus*.)

JOHN SAYERS showed the following *Roses*: Auberon, Lindley, Baronne Prevost, La Reine, Duchess of Sutherland, Psyche, Bernard, Rivers, Lane, Cornet, Antigone, Prince de Galles, Prince Albert, Marshal Soult, Madame Laffay, Madame Lamoriciere (new,) Duc d'Isley, Julie Dupont, Geant des Batailles, Sidonie d'Orissy, Dr. Marx, Marquise Bocella, Souvenir de la Malmaison, Josephine Malton, Eliza Pottinger, General Dubourg, Mrs. Bosanquet, Cels, Louis Philippe; Princess Adelaide Moss, Luxembourg Moss, Red do., White do., Crested Provins, La Sylphide, Perigot, Veluste, Lady Stewart, Abbe Berleze, George IV., London Pride, Persian Yellow, Harrison, Queen of the Prairies.

Peonies—several varieties, making a fine display.

M. KELLY & Co. had a large display of *Roses*: *Remontants*—Adele Mauzee Antigone, Auberon, Baronne Prevost, Bouton de Flore, Commandant Fournier, Comtesse Mole, Cornet, Dr. Marx, Duc d'Aumale, Duchesse de Nemours, Duchesse de Rohan, Duchess of Sutherland, Earl Talbot, Edward Jesse, Eugene Sue, Fulgorie, Geant des Batailles, Isaure Lablee, Jacques Lafitte, Julie de Kruedner, Lady Alice Peel, La Bedoyere, Lane, La Reine, La Reguliere, Leonie Verger, Lindley, Louis Bonaparte, Mad'e de Belfort, Mad'e Emma Dampiere, Madame Laffay, Madame Trudeauaux, Mardonius, Marechal Soult, Marquise Bocella, Mrs. Cripps, Mrs. Elliott, Niobe, Noel, Pomponne de St. Radigonde, Portland Blanc, Pourpre Royale, Preval, Prince Albert, Prince of Wales, Reine des Fleurs, Reine du Matin, Rivers, Stanwell, Yolande Arragon, and other varieties.

R. B. PRICE: *Roses*—Marechal Soult, Mrs. Elliott,

Geant des Batailles, Madame Laffay, La Reine, Yolande d'Arragon, Aubernon, Rivers, Bouquet Blanc, Princess Helen, Paul Joseph, Perigot, Auritii, Vermosa, Bonne Genevieve, Red Moss, Baltimore Belle, Queen of the Prairies, Stanwell's Perpetual, Rivers' George IV; Peonies, a large bunch of Humei and fragrans.

S. M. CARTER, besides the ornamented pyramid of bouquets, had two show stands of choice Roses, embracing—Paul Joseph, Baronne Prevost, Anisette, Madame Laffay, Prince Albert, Cerisette, Portland Blanc, George IV., Marshal Soult, Queen of the Prairies, Marquise Bocella, Amy Robsart, Fulgorie, Edward Jesse, Louis Bonaparte, Glorie des Rosamenes, Mad'e Despretz, La Reine.

PETER OUTCALT sent three baskets of cut Roses, embracing fifty varieties, of the choicest kinds—fine specimens, neatly done up and displayed.

Mrs. BUCHANAN: One basket of choice flowers—beautiful variety of Roses, Honeysuckles and Syringa.

Mrs. S. RINTZ: One basket of flowers; Damask Roses, etc.

Mrs. G. SLEATH: Three large baskets of flowers, and several parcels of grasses and grain.

N. B. SHALER: A large basket of choice Roses and Peonies.

Mrs. McAVOY: A large basket of choice flowers for decorations.

R. M. BARTLETT: Pæonia Humei, Rose La Reine, etc.

Mr. TURRILL: Monthly Pinks, Peonies, and Roses.

Mr. ERNST: A large basket of about fifty varieties of fine Roses, Antirrhinums, Iris, Glycine, Pinks, Larkspurs, and various other plants.

WM. ORANGE: Fifty-nine varieties of fine roses.

BOUQUETS.

D. McAVOY: One large bouquet of fine flowers, and two hand bouquets.

Mrs. BICKHAM: Five bouquets.

M. McWILLIAMS: Thirteen bouquets, choice Roses.

Mrs. CARTER: A handsomely decorated stand, with thirty-two bouquets of Roses and other flowers, among which were the Phlox Van Houtii, Chinese Pinks, and other flowers, set off with beautiful grasses.

JOHN AND ISAAC JACKSON: Two hand bouquets.

LOUIS JACKSON: One large bouquet

MARY H. JACKSON: Two large parlor bouquets.

W. COX, Jr.: Six bouquets.

Mrs. HEAVER: Twenty bouquets, 2 basket bouquets.

R. B. PRICE: One hand bouquet.

FRUITS.

G. SLEATH: *Strawberries*—A new Seedling Strawberry, and a plate of McAvoy's Superior.

T. V. PETICOLAS: Jenney's Seedling, fine specimens.

D. McAVOY: Large plates of Schneicke's Pistillate, McAvoy's Superior, and his No. 1.

W. E. MEARS: "Washington," or Iowa.

WM. McLAHLIN, of Ky.: A plate of Hovey's Seedling, very fine.

H. IVES: Three plates of Iowa, one of Keen's Seedling (pistillate), one of McAvoy's Superior, one of La Grange, and one of Neck Pine.

S. M. CARTER: Two plates of Taylor's Seedling, four of Hovey's, two of Black Prince (pistillate), two of Boston Pine, two of Hudson, two of Iowa, two of Ohio Mammoth, two of Carter's Seedling No. 1, two of Carter's No. 2, British Queen, Methuen Scarlet.

N. LONGWORTH: A saucer of a new chance seedling, scarlet.

F. SCHNEICKE: One large plate of his pistillate Seedling.

Mrs. S. RINTZ: *Cherries*—Two plates of Mayduke.

M. McWILLIAMS: Three plates of Mayduke, very fine.

Mrs. STRONG: A basket of Black Tartarian, not ripe.

W. E. MEARS: Three branches of Plums, cut green to show the curculio marks; Italian Damask, Washington, Lex, and a seedling Early Apple, which, from its size and shape, gives promise of the excellence claimed for it.

T. V. PETICOLAS: A bunch of fine green Currants—berries of large size, variety not known.

JOHN SAYERS: *Raspberry*—Brinckle's Orange, in a pot.

JAMES HALL: *Gooseberries*—A plate of green Gooseberries.

Mrs. STAEBLER: A basket of Gooseberries.

H. MOORE (Mt. Adams): A branch heavily loaded with fine Warrington Gooseberries, plates of Yellow Amber, Crown Bob, White Smith, and a green variety.

VEGETABLES.

H. IVES: Three plates of new Potatoes, Ash-leaved Kidneys, and two other kinds; Yellow Sugar Beets.

WM. ORANGE: Early Nimble Peas; Downing's Early Turnips.

WM. COX: *Rhubarb*—Two Seedlings from Victoria; Peas—three varieties, Landreth's Extra Early, Prince Albert, Early Warwick; five Cucumbers of two varieties—one specimen measured 17 inches.

D. McAVOY: Cauliflowers.

A. WORTHINGTON: Victoria Rhubarb.

Mrs. BICKHAM—A plate of Neshaunock Potatoes; Landreth's Extra Early Potatoes.

MISCELLANEOUS.

G. GRAHAM: Claussen's Flax Cotton, in different forms of preparation.

H. D. SHAFFER: Paintings of some favorite varieties of Strawberries.

REPORT OF THE FLOWER COMMITTEE.

The Flower Committee beg leave to make the following report of the Floral Exhibition held in the Masonic Hall, June 3d and 4th, 1852. In the Plant department, the only exhibitors were D. McAvoy and W. Heaver, each of whom presented a choice collection. We regretted very much to find so few plants, having expected contributions from other nursery-men who have been prominent exhibitors upon former occasions. True, this only assumed to be a Strawberry and Rose show; and there is no doubt that the reason others did not come forward, was the injury which plants necessarily receive while confined in a room. This we acknowledge, being well aware of the damage produced by keeping plants in so confined a place; yet we consider the members should be willing even to sacrifice a few of their plants in order to maintain the standing which Cincinnati at present holds, of being prominent in the plant department. The loss should be a matter of momentary consideration in the minds of the nursery-men, and other contributors; and we earnestly hope at future exhibitions to see a more general turn out from all parties.

In the Cut Flower department we consider the display highly creditable; such specimens of Roses as were exhibited by the Messrs. Jackson, Kelly, Sayers, Ernst, McAvoy, Heaver, Outcalt, McWilliams, and others, have rarely, if ever, been shown in Cincinnati. To the class termed Remontants, or Hybrid Perpetuals, we would particularly call the attention of all lovers of Roses. The Chinese and Bourbon families we considered fine; but of one particular class, namely, the Moss varieties, we should like to have seen a more extended exhibition, although the limited collections shown were fine and well worthy of admiration.

The show-stands of Verbenas exhibited by W. Heaver were very fine; the richness and contrast of colors made it an admirable collection.

The Flower Committee respectfully call the attention of the members of the Society to the ladies who tendered their valuable assistance in the embellishment of the rooms, especially Mesdames Rintz, Sleath, McAvoy, Heaver, Carter, and the Misses Carter and Orange, to whom we suggest that a vote of thanks be awarded.

PREMIUMS AWARDED, JUNE 3D AND 4TH, 1852.

For the best twelve Remontant Roses, to M. Kelly & Co., a premium of \$3.

For the second best ditto, to John Sayers, a premium of \$3.

For the best collection ditto, to S. S. Jackson, a premium of \$3.

For the best collection of Bourbon and China, to the same, a premium of \$2.

For the second best ditto, to W. Heaver, a premium of \$1.

For the best pair of Hand Bouquets, to J. and Isaac Jackson, a premium of \$3.

For the second best ditto, to Miss McAvoy, a premium of \$2.

For the best display of Bouquets, to Mrs. Heaver, a premium of \$4.

For the second best ditto, to W. Cox, Jr., a premium of \$2.

For a large collection of Bouquets, to Miss Orange, a gratuity of \$3.

For ditto, to Mr. McWilliams, a gratuity of \$2.

For a collection of Bouquets, to Mrs. McAvoy, a gratuity of \$2.

For a large collection of Bouquets and Cut Flowers, to Mrs. Sleath, a gratuity of \$3.

For a collection of Bouquets, to R. B. Price, a gratuity of \$1.

For a pyramidal stand of Bouquets, to Mrs. Carter, a gratuity of \$2.

For a large collection of Roses and other flowers, to A. H. Ernst, a gratuity of \$2.

For a display of Sweet-williams, to Mr. Cox, a gratuity of \$1.

For a large collection of Verbenas, to W. Heaver, a premium of \$2.

For fourteen distinct varieties of Stocks, to D. McAvoy, a gratuity of \$1.

For a large and fine collection of Hybrid Remontant Roses, to P. Outcalt, a gratuity of \$2.

For a collection of Green-house Plants, to D. McAvoy, a gratuity of \$4.

For a collection from W. Heaver, a gratuity of \$3.

D. A. McGREDY,
EDWARD KELLY, } Committee.
RICHARD DAVIES, }

REPORT OF THE FRUIT COMMITTEE.

The display of Strawberries, which was expected to constitute the most attractive portion of the Fruit department of the late Exhibition, did not disappoint our expectations. It comprised eighteen varieties; of which several of the finest kinds were new, and were produced in our vicinity through the influence of the one hundred dollar premium offered jointly by this Society and Mr. Longworth, several years since, for a new seedling strawberry superior to any one in cultivation at that time. This premium was awarded last year to Mr. McAvoy; and the judgment of the committee on this occasion confirms the correctness of that award, it being their unanimous opinion that McAvoy's Superior is entitled to the palm of superiority this year as well as the last.

The premium for the best display is awarded to S. M. Carter, who exhibited the varieties mentioned in the annexed list; a seedling originated by him being among them, which the committee have named "Carter's Superb," and which, if its productiveness should

be found to equal its other good qualities, will be a very valuable acquisition to the varieties of this favorite fruit.

Mr. Ives' Iowa Males were very fine, and justified the award to him some time ago for the best earliest of the season.

Mr. Sleath's new seedling, although not equal to McAvoy's Superior, bids fair to be a valuable variety.

Dr. Peticolas exhibited Jenney's Seedling; W. E. Mears, Washington or Iowa; and Mr. McLaughlin, of Kentucky, Hovey's Seedling; all very fine specimens.

Mr. Carter's list of varieties is as follows:—Taylor's Seedling, and Black Prince Pistillate—these two varieties, although good bearers, the committee consider, from their want of fine flavor, unworthy of cultivation in this climate; Hovey's Seedling, good specimens of a well known variety; Ohio Mammoth, very large and fine, some of the berries measuring four to four and a half inches in circumference; Hudson's, next and nearly equal in flavor to McAvoy's Superior; Carter's Seedlings, Nos. 1 and 2, British Queen, pistillate, Methuen Scarlet, all good specimens of good varieties.

Mr. Schniecke exhibited a large plate of his Pistillate, which is one of the earliest of the new varieties, and on this occasion could not be suitably appreciated, it being too late in the season for the best specimens.

Mr. Longworth exhibited some of his new chance seedlings.

Mr. McAvoy, his Superior, of which we have before spoken; McAvoy's No. 1, an excellent variety.

Mr. Ives' display comprised Iowa, Keen's Seedling, pistillate, McAvoy's Superior, and Lagrange, all good.

Of Cherries there were but three exhibitors—Mrs. S. Rintz, two plates of Maydukes; Mrs. Strong, a basket of Black Tartarian; Mr. McWilliams, three dishes of Maydukes, fine.

J. Sayers exhibited a specimen of Brinckle's Orange Raspberry in a pot; of the quality of which the committee could only judge from its appearance, which is very favorable, and they do not doubt that it is a valuable new variety.

W. E. Mears exhibited some green Plums, viz: Italian Damask, Washington and Lex, and some green seedling Apples.

Dr. Peticolas and Mr. Carter exhibited Currants, not ripe, but of fine size.

The Gooseberries exhibited were as follows:—James Hall, a plate of large and good ones; Mr. Staebler, a basket of ditto; H. Moore, of Mount Adams, a branch heavily loaded with Warrington, four plates of Yellow Amber, Crown Bob, White Smith and Green.

AWARDS.

For the best display of Strawberries, to S. M. Carter, \$5.

For the best specimen of Strawberries, to Mr. McAvoy, \$3.

For Mayduke Cherries, to Mr. McWilliams, \$2.

For five Cucumbers, good appearance, to Wm. Cox, a premium of \$1. (Diploma.)

For three varieties of Peas—Landreth's Extra Early, Prince Albert, and Early Warwick—to the same, a gratuity of \$1. (Diploma.)

For a sample of Sugar Beet, fine, to H. Ives, a premium of \$1. (Diploma.)

For the best Early Peas, to William Orange, a premium of \$1. (Diploma.)

For three varieties of Early Potatoes, to H. Ives, a premium for the Ash-leaved Kidney, they being fine, of \$1. (Diploma.)

For Cauliflowers, to D. McAvoy, \$1. (Diploma.)

D. McAVOY,
RICHARD DAVIES, } Committee.
D. McGREDY,
H. IVES, }

The American Wine-Growers' Association.

The meeting in April was not reported as usual, having been crowded out of the June number.

At this meeting, Mr. Brace read an interesting and detailed report upon the communication and queries of Mr. Longworth, referred to him at the last meeting, which will be found on page 482.

Drs. Mosher, Rehtsma and others, concurred entirely with the report.

Mr. Buchanan exhibited a bottle of Catawba of the first vintage, that of 1837, made by Jacob Resor, one of the earliest wine-growers of our country. This wine has been sugared six ounces to the gallon; it has now become very mild, and is like a cordial.

Mr. Rehtsma said he detected malic acid in it, because it had been made from grapes not perfectly ripened, and referred to his previously stated theory, of the change of malic acid into tartaric acid. This wine was said to have a fine bouquet, but not a decided Catawba flavor, rather a Madeira flavor, supposed to have arisen from the use of sugar?

Mr. W. Resor stated the treatment to which the wine had been subjected—it had been in bottles four years, and this bottle was decanted last evening. The sediment was handed over to Mr. Rehtsma for examination.

The President desired the members to report upon the effects of frost upon the grapes; he had found the strongest wood most injured, slender wood least. The wood appeared sound and the buds might yet open. The injury he supposed to have been done most by the latest frosts of March, as his cuttings taken off earlier, are breaking well. He thought the rain freezing on the wood had caused most injury, especially where it was exposed to the direct rays of the sun.

Mr. Yeatman stated that his vines, with a full southern exposure, were showing remarkably well.

Mr. Kelly stated that he thought members were unnecessarily concerned by finding the main buds dead, in the early part of the season, that side buds would furnish a supply of fruit. We should not be too hasty in complaints. If the injury had occurred to the young shoots later in the season, there would be no fruit.

Mr. Resor stated that some of his foreign grapes in the vineyard appeared to be injured.

The President urged the members to continue their observations, and report in full at next meeting.

Mr. Rehtsma reported upon the condition of his foreign grapes. The Petit Noir, the earliest German grape, and the Chasselas Croquant were perfectly safe.

Mr. Bennett exhibited to the society some of his Hydrometers, and explained their use, with several specimens of spirits of different grades of mixtures; also, a book containing a scale and explanation. Referred to Mr. Rehtsma for report.

The meeting for May was held at the house of Thos. H. Yeatman. After enjoying a charming ramble about his beautiful grounds, examining the vineyards which reach to the summit of the high river hills, and hearing the practical suggestions of different vignerons as to the best modes of trimming and treating the vine, the members, having climbed to the top of Aithos, turned to gaze upon the beautiful prospect of hills, vale and river lying below them, reveling in the gorgeous luxury of the afternoon sun, reflected from fleecy clouds, concluded that the far-famed Italia could offer nothing in the way of sky, air or landscape, more perfectly enchanting. Nothing is wanting but poetic feeling to delineate the beauties that surround us.

After our descent to the house, with its envying shades, the meeting was called to order at four o'clock, when, after reading the minutes, the President rendered his tabular report upon statistics of the vineyards—from which it appears that about eight hundred acres

are devoted to the culture of the grape within this county alone.

Mr. Rehtsma then read a report upon the subject of Wine Scales and Tables made by M. Bennett, which were referred to him at the last meeting. These instruments being made to correspond with our previously adopted German scale, and constructed with great accuracy, were highly recommended to the society and the public, for weighing alcoholic, vinous, saccharine and other liquid substances.

REPORT ON ROBERT BENNETT'S WINE-SCALE.

(Manufactured in Cincinnati, Ohio.)

By the request of the American Wine-Growers' Association, I have closely examined the Wine-Scales of Mr. Bennett, and have investigated their properties. They are constructed upon the same principles as those imported by myself from Germany, and like them, show the specific gravity of liquids lighter and heavier than distilled water. Mr. Bennett has them so adjusted that the numbers on the scale will correspond to those imported from Europe.

It is a matter of great importance that our Association should introduce to the public notice, only such an instrument as shall correspond in principle and in graduation with those established by the usage of the country.

Tables are furnished with these scales, which can be used with the European instrument. They show the quantity of sugar in a gallon of the sweet must; the per cent. of alcohol in wine or spirits, also the comparative standards of New York, Philadelphia, Boston and England.

The largest sized instrument will be very useful for the wine-dealer, for the manufacturer of alcohol, of brandy, syrups, beer, for alcohols, for milk, etc.

I recommend these scales very highly to dealers in the above mentioned articles, on account of their great accuracy.

The prices, with accompanying explanatory tables, are—For the smallest size, \$3 50; for the middle size, with glass jar, \$5, for the largest size, with jar, thermometer, etc., \$10. If made of silver they will be about two dollars a piece more.

Separate tables, for the European scales already introduced, are also prepared.

L. RESOR.

Members elected—Messrs. Herman Dahms, Wagelin, Learner B. Harrison, Capt. Geo. Hatch, Wm. H. Thomeon.

The following communication was read from N. Longworth, Esq.:

To the Grape-Growers' Association.

GENTLEMEN:—I send you two bottles of sparkling Catawba wine, of 1850. It has only been finally corked and ready for boxing two days. One bottle of dry wine, of 1849, one of 1851, and one in bottle two years. These were bottled from the cask yesterday. One bottle of "a sweet wine for sweet ladies," vintage of 1850, taken from the cask yesterday. These wines are in the charge of Mr. C. Zimmerman, and he has now enough dry Catawba wine in his cellar to fill 120,000 bottles; only a small portion of it is of the proper age. The spring has been a cold one, and he has not yet bottled any wine. He holds that wine old enough for bottling should not be bottled until the spring fermentation is over. Such has always been my opinion. I request your attention to the subject, for if the doctrine be true the early bottling will injure the reputation of our wines. Large quantities have been bottled and sold for the last three months, and much of it the vintage of last year, and most of it has been sent abroad. I deem it adapted for immediate use only.

There is another practice calculated to injure the character of our Sparkling Catawba. The proper process of the manufacture is tedious and expensive,

the loss from breakage is always considerable, and sometimes amounts to sixty or eighty bottles in the hundred. This heavy loss is rare. Sometimes in unskillful hands, the wine has to be thrown back into the cask, from not having sufficient effervescence. Soda-water, spruce-beer, and the green corn champagne made in the East, may be ready for use in ten days.

Some few months since, I received a letter from a German, requesting an engagement as a champagne manufacturer, and he assured me that he could have it ready for sale in ten days from the time he began to bottle. I wrote for answer that I did not doubt it, but that I wanted a healthy wine, and one which would not require to be drunk within ten days after he had made it. Champagne wine will improve for two or three years after it is ready for sale. I saw some nine years old, that still sparkled, though it will rarely preserve its effervescence so long. Respectfully,

N. LONGWORTH.

P. S.—If any of the dry wine has merit, it is due to Mr. Zimmerman, who has had it in charge for me.—Keep cool, gentlemen, and let the wine be cool also.

The President exhibited some of the small dried grapes from El Paso, and a package of the same was presented to the society by Mr. Yeatman, from Messrs. Hunnewell & Hill, who had procured them from the pass in the Sierra. A vote of thanks was ordered to those gentlemen for their contribution.

The subject of frost, or the effect of the winter's cold upon the grape, laid over from the last meeting, was then called up, when the expression of the meeting was pretty general that the winter's injury was not so bad as had been anticipated in the early part of the season. Mr. Buchanan and others expressed their views. The vineyard of Mr. Yeatman presents but little damage from the winter's cold.

Mr. Rehliuss said, those about White-Oak, with exposure to the west winds, appear to have suffered most from the winter. Mr. Rintz, with a western aspect, had not suffered materially.

The injury from the May frosts was then considered, but little damage appears to have been sustained, and the prospect for a full crop is very flattering.

The circular directing attention of associations to the National Convention of Agriculturists, to be held in Washington on the 24th of June, was brought before the meeting, and after some discussion it was voted that the President be authorized to appoint delegates to that body to represent our interests.

Mr. Yeatman read a letter from Mr. Fleischman, our consul at Stuttgart, well known for his efforts in behalf of American Agricultural interests. The letter referred to his investigations relating to the culture of the vine and manufacture of wine, preparatory to writing a book on that subject for the benefit of our countrymen. Mr. F. has since arrived in Washington city.

The society then proceeded to the examination of the samples of wine which were upon the table from various contributors, forming the most extensive, varied, and altogether the finest collection that has ever been brought together before the association. Some of the wines were very superior, and it was agreed upon all hands that the manufacture of wine was improving in character remarkably, and assuming such a degree of importance that it was well worthy of being properly appreciated by those who would study the various agricultural interests of our country.

Who would have thought, when Menussier in 1800, planted his first grapes and Italian Mulberries in the heart of our now great city, on the gravel terrace at the corner of Main and Third streets, that the vine-culture would ever assume an attitude of so much importance as at the present moment!

Detroit Horticultural Society.

THE first exhibition for the year 1852, took place on Tuesday, May 25th. The Daily Advertiser says it was a fine affair, embracing some splendid specimens of green-house plants, such as the Cacti, the Calceolarias, Pelargoniums, and Roses, which would have done credit to any exhibition.

The chief attraction in floral excellence, was the exhibition of Tulips, of which one member had fifty different varieties. Excellent specimens of Asparagus and Rhubarb were exhibited by Messrs. Hubbard and Davis. The former was particularly worthy of notice for its size and appearance.

AWARDS.—*Flowers.*

Best collection green-house plants, to Miss Lockwood.
Bouquet of indigenous plants, to Miss Judson.
Amateur Bouquet, to Miss Campbell.
Collection of Tulips, to Mr. Hinchman.
Collection of green-house plants, to G. Ford.
Single Rose, Luxembourg, to Mr. Adair.
Pelargonium, Queen of Sarum, to Mr. Stimson.
Verbena, Robinson's Defiance, to Mr. Adair.
Collection of Tulips, to Messrs. Hubbard and Davis.
Single Tulips, to the same.
Round Bouquet, to Mrs. J. C. Holmes.
Hand Bouquet, to B. G. Stimson.
Flat Bouquet, to the same.
Dahlia in blossom, to Mr. Adair.
Lemon-tree in fruit, to B. G. Stimson.

Vegetables.

Best six heads of Lettuce, to B. G. Stimson.
Stalks of Rhubarb, to G. Ford.
Bunches of Asparagus, to Messrs. Hubbard and Davis.
Seedling Rhubarb, to T. Hall.

A premium was awarded to Messrs. Hubbard and Davis for some well preserved specimens of Golden Russet apples.

E. P. Hastings, J. C. Holmes, and F. Raymond, committee.

Buffalo Horticultural Society.

April 6th, 1852.

Exhibited by B. HODGE. Apples: Vandervere, Westfield Seek-no-further, Swaar, Pownal Spitzenburgh, Esopus Spitzenburgh, Crows' Nest Russet, Hawkins' Pippin, Block, English Russet, and one nameless.

By LEWIS EATON. Baldwin, Rhode Island Greening; most of which were discussed. Some conversation took place in regard to the culture of the Strawberry; also, as to the depredations of mice during the past winter, and the best mode of guarding against them.

The New York State Agricultural Society having appointed a time for holding their Fair, which would conflict with the Society's annual exhibition, it was determined to change the time of holding the latter to the 2d and 3d of September. Adjourned.

April 20th, 1852.

Exhibited by WARNER GRANGER. Apples: Northern Spy, Roxbury Russet, Baldwin, American Golden Russet, Swaar, Pownal Spitzenburgh, R. I. Greening.
By CHARLES TAINTOR. Baldwin.

The above were tested, and after the usual discussion, the society adjourned.

May 4th, 1852.

Exhibited by MASON & LOVERING. Pot Plants: Cactus alatus, Pelargoniums, Lady Denby, Royal George, White, Azalea Phœnicia, Bartisia pallida, Tropæolum tricolorum, T. grandiflora, Cytisus pramosus, Heliotropium peruvianum, H. grandiflorum, Civerria Attila, Cilicia: Araucaria Imbricata, Pinus excelsa, Double Tulips, Lettuce and Radishes.

By MATHIAS ZEIS. Hyacinths, Violets, Daffodils, Bluebells, Myrtle.

By Mrs. L. EATON. Crocus 3 varieties, Hyacinths, Pansies.

Prizes were awarded to Mason & Lov ring, for their collection of plants, and for the best Lettuce.

May 18th, 1852.

Exhibited by L. EATON. 3 bunches Asparagus.

By W. R. COPPOCK. 12 stalks Rhubarb, 1 bunch Asparagus.

By A. BRYANT & SON. Asparagus 4 bunches, Rhubarb 5 varieties, 2 bouquets of Tulips, Snowdrop, Polyanthus, Hyacinths, Pyrus japonica, etc.

By A. H. BRYANT. Pansies 8 varieties.

By Mrs. S. EATON. Tulips 10 varieties, Hyacinths 10 varieties, Pansies 6 varieties, double flowering Cherry, Pyrus japonica, English Violet, Bluebell, Polyanthus, Periwinkle.

Prizes were awarded, as follows :

For the best 6 varieties of Pansies, to A. H. Bryant, \$1 00.

For the best 3 bunches of Asparagus, to L. Eaton, \$2 00.

For the best 12 stalks of Rhubarb, to A. Bryant & Son, \$1 00.

The committee of publication presented 300 copies of the annual report, which the Recording Secretary was ordered to distribute, after which the society adjourned.

June 1st, 1852.

Exhibited by Mrs. VANDEVENTER. Apples : Northern Spy.

By MASON & LOVERING. Cactus Ackermania, Epiphyllum Jenkinsonii, Cereus speciosissimus in pots; Tulips 50 varieties, 2 bouquets of Roses, Geraniums, Heliotropes, Verbenas, Fuchsias, Euphorbias, etc.

By Mrs. L. EATON. Tulips, 10 varieties.

By A. BRYANT & SONS. Tulips 20 varieties, Peonies 4 varieties, Spirea prunifolia, Lily of the Valley, Pyrus japonica, Snowdrop, etc., 3 bunches Asparagus, 4 varieties Rhubarb.

By Mrs. H. SHUMWAY. Jonquils.

The prize for the best 10 varieties of Tulips was divided between Mrs. Eaton and Mason & Lovering.

The Northern Spy apples exhibited by Mrs. Vandeventer, were tested, and found to be perfectly sound, full of richness, aroma and high flavor, and the society was unanimous in esteeming it the very best late keeping apple. Adjourned.

JNO. B. EATON, Recording Secretary.

Genessee Valley Horticultural Society.

The first exhibition of the season was held at Rochester, on the 11th of May.

The contributions were not numerous, but several articles were exhibited in greater perfection than heretofore.

Messrs. Ryan, Donnellan, A. Frost & Co., Ellwanger & Barry, C. F. Crossman, J. H. Watts, appeared among the contributors.

Rome Horticultural Society.

The members of this association have organized their committees and adopted a premium list for the year 1852. The first exhibition was appointed for June 24.

The time of the fall exhibition is not stated in the New York Farmer, whence this information is derived.

It appears that punctuality is a virtue highly esteemed among the contributors, and all who do not come up by a certain hour, lose their chance for a premium. Right.

Another arrangement is admirable—all articles, except house plants, are sold in the evening for the benefit of the society.

Franklin Co. (O.) Agricultural Society,

ARE determined to purchase a permanent site for their fairs—they have advertised for proposals to sell them, and appointed a committee to select, such a site, not less than five acres.

Their committees are preparing premium lists, cups, etc. Will they award any books?

American Institute.

At the annual meeting in May, the following officers were elected :

President—James Talmadge.

Vice-Presidents—Robert Lovett, Robt. L. Pell, Geo. Bawn.

Rec. Secretary—Henry Meigs.

Cor. Secretary and Agent—Adoniram Chandler.

Treasurer—Edw. T. Barkhouse.

Managers of the Twenty-fifth Annual Fair—Joseph Torrey, James R. Smith, Isaac V. Brower, William Ebbitt, John A. Bunting, F. W. Geissenhainer, Jun., Petre B. Mead, Paul Stillman, Benedict Lewis, Jun., William Hall, Edwin Smith, Benjamin Aycrigg, John B. James, Lewis G. Morris, Richard M. Hoe, George S. Riggs, Patrick Henry, George Harrison, Jordan L. Mott, Shepherd Knapp, Joseph Cowdin, Thomas W. Harvey, George Dickey, Joseph R. Taylor, Jared L. Moore.

Editorial.

Letter from the Editor.

CLEVELAND, June 19th, 1852.

LEAVING home just as the printer is saying his last words to the readers of the July number, I can not forego the opportunity of asking them to share with me the delights of an escape from the city and its thrall.

The modern methods of locomotion, with all their boasted advantages of rapidity,—

saving time by enabling us to fly across an empire like this young giant state of Ohio,—are not, however, so well calculated for the more perfect enjoyment of nature, arrayed as now, in all her loveliness of early summer; when the very influences of the season court repose; while groves in richest green, orchards, meadow, field and hill-side, bearing the varied crops of grass, and corn, and waving grain,

rich in promise of the harvest nigh,—of right demand that their beauties should be more leisurely surveyed. They certainly deserve a more careful scrutiny; it is well for us to pause and express, or at least allow ourselves to feel the thankfulness with which we should acknowledge the blessings that surround us on every side.

The ride from Cincinnati to Springfield, by the way of Dayton, presents a continued succession of beautiful objects. The scenery is nowhere wild and romantic, but ever rich and quietly beautiful;—broad fields with gentle swells, rising by degrees in the distance to rounded hills, and containing, at moderate distances, comfortable farm houses and other evidences of the prosperity of the inhabitants. Substantial towns, and young cities, have grown up in this fertile valley of the great Miami.

The barley fields were white to the harvest; the other grains have passed their bloom, and will soon need the sickle; and the vast fields of corn begin to shade the ground, in response to the sunshine, and shower, and nursing labors of the husbandman. Large fields of flax are opening their blue eyes toward Claussen, who is to bring *stems* as well as seeds into use.

At Springfield, great preparations are making for the trial of agricultural instruments, which is to be held by the State Board, so soon as the grain is ripe enough. The competitors are "whetting the scythe," with their reaping machines, in great anxiety as to the result. Near this town, there is quite a manufactory of agricultural implements, by the enterprising firm of Warder & Brokaw, who hope to be successful competitors in the approaching trial. The broad silver medal of the state is no mean award.

A long but rapid ride brings the traveler from Springfield to the "Forest City," on the shores of beautiful lake Erie, in very good

season; and he, who is not carried away by the spirit of modern travel, *the desire to get there*, will be glad to embrace the opportunity of resting a day in this delightful place, noted for the beautiful shade of its streets, its admirably rural-urban residences, as well as for the fine water prospect, and the energy of its people.

A morning ramble enabled me to reach a garden, and revel among the charming roses of Mr. McIntosh's choice collection. The prospect for cherries, now beginning to ripen, offers quite an inducement to revisit this city in a couple of weeks. The market appeared well supplied, and furnished fine specimens of strawberries to bring home to breakfast at the hotel, to the no little amusement, and perhaps chagrin, of those who had preferred a morning nap, to a healthful ramble amid the shady groves and lovely private gardens shedding fragrance on the air.

It is pleasant to find so great an interest in the State Fair to be held here on the 15th of September, as is already manifested among the citizens of all classes. The gardeners are determined that Floral Hall shall be well decorated by their efforts, but expect that the rest of their confraternity throughout the state will freely aid with liberal contributions.

The fruit prospects are good in this region.

New Apples.

At the confectionary shop of Wm. Hobbes, corner of Third and Sycamore streets, there were new apples on the first week in June; a pretty striped specimen, variety unknown. They were brought from Memphis, Tennessee.

Acknowledgements.

To my kind friends in the editorial fraternity, I take pleasure in rendering the thanks due for their efforts in placing the claims of this journal frequently before the people in the most flattering manner. Being too much oppressed with native hesitancy in proclaim-

ing the merits of my own bantling, such extrinsic aid is peculiarly valuable.

To the gentlemanly conductors of the Mercantile Library, for a pretty copy of the poem by T. BUCHANAN READ,—“The Onward Age,”—delivered at the recent celebration.

To M. McWILLIAMS, and to HENRY IVES, for those “premium” Maydukes and strawberries, each the *best earliest*, the Editorial palate would dictate the appropriate acknowledgment.

Some kind friend has sent me by mail, the last (seventh) edition of that choice *original* work on American Fruits, by JOHN J. THOMAS,—“The American Fruit Culturist.” This edition contains forty pages of new matter, with full directions for the pruning and management of Dwarfs and Pyramids, now attracting great attention from some of our cultivators. Everything from this author may be safely recommended.

T. Buchanan Read's Poem.

We have received from the Mercantile Library Association a very neatly bound copy of the poem, “The Onward Age,” lately delivered by the above named gentleman, before this excellent and popular institution, in honor of its eighteenth anniversary.

The present production of the painter-poet has been, and will be greatly admired, by all who appreciate the conception and expression of the poetic sentiment. “The Onward Age” we have read with attention and delight, at least half a dozen times, and upon each perusal experienced new pleasure. Mr. READ is an ornament to American literature; and we are proud to rank him among our citizens. The poem, polished in all its parts, abounds in singularly beautiful passages, and we regard it as one of the best efforts of the author. No cultivated mind can fail to discover much of originality and charming reflection in these musical lines. “The Onward Age” is on

sale at the bookstores, and at the Library counter.

The poem is very handsomely printed by Messrs. Morgan & Overend.

Cin. Commercial.

NEW FUCHSIAS—Mentioned by Mr. Hovey: *America*, white; *Diadem*, dark purple; *Forget-me-not*, bluish white; *Orb of Day*, dark scarlet; *Nectar Cup*, novel rose; *May Morn*, brilliant rose; *Republic*, pale rose, and striped with crimson and cherry; *Snow Ball*, white; *North Star*, dark purple; *Defiance Superb*, light scarlet.

These are, all but the last, the product of Mr. Hovey's garden, and he describes them as fine.

The peach crop of Delaware, the past season, proved a very valuable one, over one hundred thousand dollars having been realized from it. The Wilmington Republican says that Mr. John Reynolds sent about 37, 000 baskets of this fruit to market.

A very intelligent Maryland farmer states that he has peach-trees eighty years old, which still bear full crops of good fruit.

Exchange.

THE LEGISLATURE OF ILLINOIS meets in called session the first Monday in June. We understand that there will be a strong effort made to push Professor Turner's plan for an Industrial School or University through; and for our part we hope it may succeed. Illinois is now on the high road to prosperity. Her prospect is fair to become the first of Western States in prosperity and progress. Her public works are rousing up the energies of her citizens, and attracting thousands of people to her limits. Now why can not she be first in the great revolution which is to bring about a new era for the working classes. Let her lead off in this good work, and just so sure as her bright example in projecting and constructing those noble thoroughfares which are doing so much for her posterity, will be followed by the neighboring states, so sure is it, that in this, too, they will cheerfully acknowledge her leadership and copy her example.

Valley Farmer.

METEOROLOGICAL TABLE.

CINCINNATI, MAY, 1852.

THERMOM.			WEATHER.			RAIN.	WINDS.	
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	58	79	clear	clear	clear ....	....	1	Light S., SW. and W.
2	53	74	do.	do.	rain ....	.35	2	Calm; light NE.; light W.
3	52	69	rain	variable .	clear ....	.10	3	Light NE.
4	49	74	clear	clear	do. ....	....	4	Light N.
5	50	81	do.	do.	do. ....	....	5	Calm; light S; light E.
6	52	78	do.	do.	variable .	....	6	Calm; light SW.; calm at eve.
7	55	81	do.	do. A..	clear ....	....	7	Light S.
8	62	84	do.	do.	rain, var.	.10	8	Light SW. and S.; N.
9	61	82	do.	do.	cl'y., rain	.05	9	Calm; light SW.
10	65	73	rain	variable .	variable .	.10	10	Calm; light SE.
11	56	75	variable .	var., rain	do. ....	.55	11	Calm; light SW.
12	66	78	clear	clear	clear ....	....	12	Calm; light SE.; calm.
13	62	77	do.	variable .	var., rain	.35	13	Light SE.
14	65	79	do.	rain, clear	variable .	.15	14	Light S.; brisk S.; light S; brisk W.
15	63	76	variable .	clear	clear ....	....	15	Light SW; W; calm at eve.
16	60	82	var., rain	do.	do. ....	.10	16	Calm; light S.; squally; light SW.
17	62	63	variabl,	do.	do. ....	....	17	Brisk NW.; high NW.; brisk NW.
18	46	67	clear	do.	do. ....	....	18	Calm; light SE.; S.; SW. [Strawberries.]
19	49	70	do.	variable .	do. ....	....	19	Light SW.; brisk SW.; high W.
20	42	64	do.	clear	do. ....	....	20	Light NW.; calm at eve. [Peas.]
21	43	73	fog, clear	do.	do. ....	....	21	Calm; light S.
22	58	67	cl'y., rain	rain	variable .	.65	22	Calm; light SE.; calm at eve.
23	62	79	do. do.	clear	clear ....	.05	23	Calm; light SW.
24	61	76	cloudy...	do.	do. ....	....	24	Light SW.
25	59	84	fog, clear	do.	do. ....	....	25	Calm. [Cherries.]
26	64	75	cl'y., rain	rain	do. ....	.45	26	Calm.
27	70	79	cloudy...	do.	variable .	.15	27	Light SW.; brisk SW.; calm.
28	64	85	fog, clear	clear	clear ....	....	28	Light SW; calm.
29	69	86	cloudy...	do.	do. ....	....	29	Light SW.; brisk SW.; light SW.
30	70	79	variable .	do.	do. ....	....	30	Light N.
31	57	80	clear	do.	do. ....	....	31	Calm; light NE.
Inches, 3.15							Mean temperature of the month.....66.81	
Average quantity of rain, May, the last ten years, 4.02.							do. do. May, 1851,.....68.76	
Clear days in the month.....11							do. do. do. 1850,.....61.34	
Variable—sunshine at times, .....20							do. do. do. 1849,.....65.74	
Cloudy—sun not visible, .....00							do. do. do. 1848,.....68.55	
							do. do. do. 1847,.....64.26	
							do. do. do. 1846,.....69.48	
							do. do. do. 1845,.....63.23	
							do. do. do. 1844,.....67.73	
							do. do. do. 1843,.....63.75	
							Mean of the above, .....65.96	

REMARKS.

The three Spring months have been remarkable for the frequent recurrence of showers; there having been nine in March, thirteen in April, and thirteen in May—making altogether a little more than fourteen inches of water.

But five days without sunshine occurred in March, three in April, and none in May.

Snow in March, one-fourth of an inch; none since.

The 18th, 19th and 20th of March were very cold days, the mercury indicating at sunrise 23°, 22°, and 15°, causing much injury to vegetation; but the mean temperature of the month was 2° above the usual average.

The mean temperature of April was 53½°, being 3° below the mean of that month for the last ten years; the lowest mark at sunrise being on the 2d, 34°, and falling 4° or 5° below that, in the vicinity of the city, where ice was formed of considerable thickness. On seven other days the minimum was 36° to 39°; with only three cloudy days in the month.

The lowest temperature in May was 42°, on the 20th; but falling several degrees lower in the vicinity

of the city, caused some white frost, which, in a certain state of the atmosphere, occurs at and under 41°. The mean temperature of the month is 1° higher than that of the last ten years. Thus it will appear that, with the exception of a few cold days, we have had quite a moderate and pleasant Spring, the frequent showers in which have proved very beneficial to vegetation.

The Spring east of the mountains has been unusually severe, even as far south as Wilmington, Delaware; where the mean temperature of March was 40½°, being 7½° lower than here; and April was especially disagreeable—mean temperature 42½°, being about 11° lower than here. The Reporter (Philadelphia) says—"Upon an average, eight-tenths of the sky was covered with clouds the whole month, and there was but one clear day. Snow fell on five days, and the highest temperature was 60°."

The absence of storms, and rare occurrence of high winds here, favor us very considerably.

JOHN LEA.

Univ. of
California



THE HOMESTEAD.

THE HOMESTEAD.



Vol. II.

AUGUST, 1852.

No. 11.

Miscellaneous.

THE POTATO—ITS ORIGIN.

THE writer, a few years since, had occasion to investigate the "potato question" with some degree of thoroughness; and having lately observed that many writers are obscure or erroneous with regard to the history of this plant, he thinks it not improper to correct their misapprehensions.

Among other late historical authorities, Willson's American History—a work, by the way, which is often of equivocal authority—says that it was first brought from America into Ireland in the year 1565. Putnam's World's Progress and Dictionary of Dates, a valuable and generally authentic work recently published, gives the year 1563 as the date of its introduction. Both are incorrect. There is no reason to believe that potatoes were introduced into Great Britain and cultivated until twenty or more years after the dates given. Unimportant as the difference of a few years may seem at the first view, the subject in all its bearings, speculative and practical, hinges upon the difference of these various dates.

It was for a long time universally, and is perhaps at present generally believed, that

the potato, (*solanum tuberosum*), which we distinguish as the "Irish," is indigenous to the North American continent. As a question of fact it is one of great interest; as indeed is every inquiry connected with a vegetable which forms so large a portion of the substantive food of the most civilized nations of the earth. For the locality of the origin of any vegetable production being positively known, it is there we must look to ascertain its circumstances of greatest vitality and productiveness, and the causes and remedy for the diseases to which it may be subject. So, upon the other hand, the successful denial of an alleged origin exerts a negative influence of the same character.

The distressing events still fresh in our recollection, when, from the failure of their almost sole article of food, human beings by thousands wasted away beneath the gnawing tooth of famine, and when, but for the sympathies of the Christian world, almost an entire nation would have melted like snow from the face of the earth—these events have made it imperative upon philanthropy that, if possible, not a thing con-

cerning the origin, history and nature of this plant should be left doubtful or erroneous. Prior, however, to these events, the history of the potato had received a great deal of attention from the scientific world. Much discussion, speculation and research had taken place in regard to the time when, and the place whence it was first introduced into Great Britain,—involving the question of fact as to whether it was, or was not, found in a state of cultivation among the aboriginal tribes of North America. The prevailing conclusion has been, that it was actually thus found by the colonists who were sent out to Virginia by Sir Walter Raleigh, in the year 1584; and that it was introduced by them into Ireland, on their return, in 1586–7.—And though, from various causes, this afterward came to appear improbable, yet one circumstance, to which we shall again recur, has seemed to authenticate it beyond the reach of positive denial.

The subject has excited additional interest in regard to the degree of affiliation and intercourse which in former ages might be supposed to have existed between the aborigines of the northern, and of the southern continents. Scientific ethnological research is accustomed to draw conclusions from circumstantial evidence; and from coincidence of tradition with recorded events, analogies of language, manners and customs, and similar means, to form something like a connected idea of the political history of nations, about whom there is, and has been, no written record. Not the least interesting among these researches, is that of tracing the migrations of the nations over vast tracts of land, and even over seas, by their implements of husbandry or of warfare—by the architecture of their dwellings, and particularly by their domesticated animals, and the vegetable substances used and cultivated for the purposes of food. Thus, if a plant, ascertained to be

indigenous alone to a certain portion of the globe, is found under cultivation in another portion, it argues a previous intercommunication.

Now, it is a well established fact, that the potato was unknown in Mexico before the conquest of that country by the Spaniards; but that it was found in Peru and Chili. It has been asserted that it was also found under cultivation among the aborigines of Virginia. But this is probably an error; which it is the design of this paper to rectify.

When Columbus returned to Spain from his first voyage, he carried with him as specimens of the productions of the newly discovered country, *maiz*, *igname roots*, and *batates*. The first of these still retains its original Indian name, with slight orthographic variations, in the Spanish, French and English languages. The word "*igname*," it is believed, has become corrupted into the present *yam* of the West Indies. The "*batate*" is now called *battata* in Spain, *camote* in Mexico, *apichu* in Peru, *patate douce*, *patate sucre* and *patate de Malaga* in France, *sweet potato* where the English language is spoken, and *convolvulus battatas* in the language of science all the world over.

Soon after the introduction of the *battata* by Columbus, the cultivation of the root became common in the south of Europe. At what time, and by whom, they were first brought into England, is not precisely ascertained; though it is stated that they were sold in the London markets so early as the year 1591. Many have supposed that they were brought by Sir John Hawkins, on his return from his slaving voyage in 1565. This in itself is not improbable; for previous to that time they were extensively used in the Portuguese vessels as subsistence for the slaves during the passage; although the name *patatate*, by which they first known in England, would seem to indicate their introduction

through the French. The *solanum tuberosum*, or Irish potato, retains its original Peruvian name of *papa* in all countries where the Spanish language is spoken. In France, although the common name, as everybody knows, is *pomme de terre*, yet in some of the southern departments it is still called *petate*; the more proper name being *morelle*.

For a long time the potato was supposed to be indigenous to Peru, where it was found by the Spanish conquerors, who completed the subjugation of that country in the thirty-second year of the sixteenth century. Its cultivation extended from the fifth degree of north latitude, over the intermediate space, to the fortieth southern parallel. The early observations of Humboldt and Bonpland had established, that no species of *solanum* with a nutritive root vegetates spontaneously between the tropics. But of late years it is asserted by travelers that the potato is found wild in the neighborhood of Lima; although it is still doubtful whether these were not upon the banks of rivers, or in low lands subject to overflow, whither the tubers or seeds of the cultivated plant might have been carried by freshets, or have been distributed by the system of irrigation which generally obtains in Peru. Nowhere in South America is it established beyond controversy that the *solanum tuberosum* has been found wild upon high lands, and in clefts of rocks, and other places out of the reach of these agents, except in the state of Chili. There it has thus been observed only in the regions near the sea-coast; which furnishes a hint of its saline proclivities, by which our farmers may perhaps profit.

Knight is in error, in stating that "Humboldt doubts if sufficient proof can be produced of this root having been indigenous to South America." On the contrary, Humboldt expressly gives it as his conclusion, that the cultivation of this plant accompanied the

gradual conquests of the Incas, from the mountains of Chili northward to the equator and beyond it. In the course of his very interesting speculations on this subject, Humboldt, in commenting upon the declarations of certain European writers, who had asserted that the potato was found in Virginia by the English colonists of 1584, and by them introduced into Ireland on their return in 1586-7, expresses much doubt as to the correctness of those statements. For, since it was uncertain whether the plant was indigenous to North America, and certain that it was not known in the intermediate country of Mexico, its appearance among the tribes of Virginia would indicate a previous intercommunication by sea between the northern and southern continents,—of which there was no confirmatory evidence whatever. He inclines therefore to the belief, that if, as stated, potatoes were brought from thence by these colonists, they must have been received from the Spanish colonists, or brought to Albemarle from the Spanish Main by Sir Francis Drake.—Humboldt however adds, that the evidence is so strong as almost to claim assent to the belief that it is indigenous to some portion of the North American continent.

This evidence consists in two strong and apparently positive circumstances. The first is, that Thomas Herriot, who accompanied the expedition in 1584, upon his return two years afterward, in a report on the country, described a root, under the name of *openawk*, which he found there, and which is understood to be the potato. Second: Gerard, in his "Herbal," published in 1597, describes with a drawing this root, under the distinctive name of *patate virginensis*, stating that he had received the roots from Virginia or Norembega. All European writers, from Sir Joseph Banks, who wrote in 1808, down to Knight, who published a few years since, seem to consider this evidence unanswer-

able, if not, indeed, satisfactory and conclusive upon the subject.

But it has never been pretended that the Spaniards at St. Augustine, nineteen years before—or the English at Jamestown, twenty-three years after—the failure of the Albemarle settlement, found the potato among the aborigines of either place. The "Attempt to ascertain the Time of the first Introduction of Potatos," by Sir Joseph Banks, was not written till more than two centuries after the period alleged; the *solanum* from the first had usurped the name of the *battata*, and the history of the two plants, obscure at the best, had become utterly confounded. Nor do we discover that Sir Joseph, or Humboldt, or other writers, influenced their judgment by any knowledge of the character and capacities of the soil of North Carolina.

Our own personal observation of that portion of the United States warrants us in asserting that the *solanum tuberosum* could not have been indigenous to the soil of Roanoke and Albemarle; and further, that if the aborigines had this plant under successful and continuous cultivation, they were possessed of a secret unknown to their white successors. The soil is light, dry and warm, adapted to the cultivation of the *sweet* potato, and not to that of the *Irish*, which flourishes best in comparatively cold and damp places. The *solanum* can not now be there cultivated with advantage. It is true, that it is sometimes planted there, as well as further south, but from tubers obtained at the North; and it is regarded merely as a summer vegetable, not as a staple for subsistence during the winter months; and unless the stock is continually renewed from the more northern states, it soon entirely runs out. On the other hand, the *sweet* potato flourishes with a luxuriance and productiveness unknown in any other section of the country. So generally is this understood on the Atlantic sea-

board, that in the commerce between the states on the coast, in the northern states the terms "Carolina" and "sweet" potatos are synonymous; while in the Carolinas and Virginia the *Irish* potato is called almost universally the "northern" or "Yankee" potato. We have therefore not the shadow of doubt, that if the potato was, as is alleged, carried to Ireland by the Albemarle colonists, it must have been obtained through intercourse with the Spanish possessions in South America.

It seems proper, after these assertions, that we should proceed to obviate, by satisfactory explanation, the evidence upon which the general belief is founded, and to which we have taken exception. This evidence, as before remarked, rests on the drawing, description and name given in Gerard's Herbal in 1597; and upon the description by Herriot, who accompanied the attempted colony in 1584-5.

With regard to the former, it is only necessary to recall the fact that in those days geographical knowledge was in its infancy, and all geographical appellations in regard to the new world were extremely vague and indefinite. *Norembega*, a title long obsolete, Belknap says was given by some adventurers to the coast of Maine. But we find in the "*Navigazioni d'un Gran Capitano di Dieppa*," that the entire country between Cape Breton and the Floridas, examined by Verazzano in 1524, and named by him New France, was called *Nurumbega* by the natives. We also find among the titles conferred by Francis I on Roberval, in 1548, that of *Seigneur de Norimbeque*. The term "Virginia" was equally comprehensive in its application, and in England at that time was used to designate what was afterward known as "America." Indeed, one of the early writers describes it as producing fruits which are now known to be solely tropical; and more than one speak of "Virginia" in a manner which shows that it

was then a general name for the entire western continent. It is not at all improbable, then, that Gerard, in saying that he received the roots from "Virginia," meant merely to say that they came from somewhere in America.

The evidence by Herriot's description, is much more positive and more difficult to be surmounted. The description is as follows: "The roots of this plant are round; some as large as a walnut, others much larger. They grow in damp soils, many hanging together as if fixed on ropes. They are good food, either boiled or roasted." There appears to have been a general acquiescence in the belief, that the plant thus described by the earliest English visitor of the American shores must have been the *solanum tuberosum*. Besides other historians of less note, Bancroft adopts this belief without hesitation or distrust; nor are we aware that heretofore it has ever been disputed.

We have before remarked, that personal observation has acquainted us with the climate, soil and capacity for production, of North Carolina and eastern Virginia. We may add, that a residence of a year in the *Estado del Ecuador*, in South America, afforded opportunity for similar observations there. In that State, lying directly on the equator, it will be remembered that the climate is marked by altitude,—upon the declivities of the mountains,—each successive elevation of about four hundred feet, as estimated by Humboldt, being equivalent to a degree of latitude from the equator toward the poles.

There is not probably another spot on the earth, wherein are met together so many and so varied phenomena of nature—the gentle and the grand, the prolific and destroying. The imaginative contemplator of the outward features of manifest creation, the poet, or the painter, finds here his wildest dreams and the

utmost efforts of his presumptuous genius sink, awe-stricken, into powerless insignificance before these actual creations by the Omnipotent Hand; and the man of science, who would fain pry into nature's more hidden mysteries, may behold, in one single glance of the eye, a field for study and investigation, for which a hundred mortal lives would be too short. Extremes and means of every climate and every soil here meet, and concentrate in one small focus which may be compassed by a square of but five degrees of latitude—the loftiest mountains of perpetual frost, and the loveliest valleys of perpetual verdure! Beneath skies of the purest and most cloudless blue, with eternal summer air around, you may daily see and hear the vast cloudy volumes of storm and tempest, which unceasingly roll over the trackless sides of the lofty Cordilleras, raging with wintry fierceness. At noonday, lounging beneath the circled shadow of some familiar home-like tree, you bare your brow to the soft breezes of a never-ending spring. Raise your eyes afar, where, wrapped in white robe of virgin snow, its form clear and accurately defined as the most perfectly chiseled marble column, towers in solemn and solitary grandeur the largest volcano in the world—three miles straight into the air—Cotopaxi! whose dormant fires wake once in a century! whose dread artillery scatters huge lava masses of many thousand tons, strewing the earth for miles on miles, like grape-shot from a cannon!—the roar of whose fierce blast stills the forest beast for fourscore leagues around! whose flames aspire to reach the heavens—frighting with lurid light the midnight mariner a thousand miles away on the broad bosom of the western ocean!—Turning your eyes away, but with the image stamped imperishably in your soul, you now look down on the broad and even valley of Ambato, like a calm sea of verdure, its placid

streams glistening like silver threads in the meridian sunlight, its villages and hamlets with white walls and red-tiled roofs, gardens and cornfields lessening and fading into the distance, till all are lost in the far blue vapor impenetrable to human vision. All quiet and still as if darkness brooded over it; for now the midday heat, reverberating as in a furnace, compels all animal life to seek for shelter and repose. But when the rapidly declining sun has marked two hours upon the dial, mounting your sure-footed, patient mule, and descending the mountain-side through narrow, steep and often perilous pathways, before that sun has dipped behind the western range, you are ambling over those level streets, late so silent and deserted, now filled with busy bustle and joyous animation. And in the first blush of the morrow's morning you wander away among the arched pathways of some Hesperides of sweet limes and fragrant pines, breathing the perennial breath of orange blossoms, and crushing the golden fruit with heedless footsteps; and the whole air glitters with gay birds, warbling their songs of joy and pecking the purple figs that burst with over-ripeness. The world teems with concentrated life. Your own heart leaps fast in unison, and your veins swell with a double fullness of quickened and vigorous manhood; while the clear brown cheek of that daughter of Old Castile—the Eve-maiden of this morning's Paradise—kindles with crimson warmth as you gaze down into her upturned lustrous eyes! Ah, those gardens! We may visit them sometime again, good reader; but now—potatoes!

Looking through the vine-clad branches which have never known the nakedness of winter's frost, away up on the green sides of the hills, so small as to appear scarce bigger than acorns, yet so distinct in the vaporless air that the very doors may be seen to turn upon their hinges, are the huts of the Indians,

in the midst of their patches of potatoes.—Following down with the eye for two or three thousand feet, passing successively the belts of rye, of wheat, and of maize, we find, almost at our feet, the twining vine of the *sweet batata*. Within less than a linear atmospheric mile of each other the two kinds of potatoes are grown; but so far as climate is concerned, five or six hundred miles apart! But leaving these mountains, valleys, and associations, we return to the more even pathway of our present subject.

Entertaining an assured conviction, founded on the premises we have mentioned, that the *solanum tuberosum* could by no possibility have been the plant discovered by Herriot, it followed, that we should determine what known indigenous plant would answer the terms of the description. Such a plant we have found in the *apios tuberosa*—a plant not only indigenous, but peculiar to North America. We do not know that it is fully described in any scientific work; but it is probably familiar to botanists, and is certainly so to the farmers' boys. The stem is a soft herbaceous vine, with pennated leaves, purple flower, slightly fragrant, and cylindrical seed pod. The root, or, rather, underground stem, is composed of a tough, woody fiber, about the size of an oat straw, swelling into tubers at intervals of two or three inches. These tubers are of pleasant flavor, and are "good food, either boiled or roasted." In the Atlantic states it is called, from these tubers, the "ground-nut;" on the western prairies the vine and pod give it the name of "prairie pea." In the cold climate of New England the average size of the tubers is about that of a hickory-nut: in the South and West it attains a greater size—"some as large as a walnut, others much larger."

It is certain that it was used for food by the aborigines of New England, who made known its qualities to the whites; and also

that it is extensively used at the present day by the various tribes who inhabit the territories beyond the Mississippi: and in the absence of positive testimony, it is fairly to be presumed that their affiliate tribes of Virginia and North Carolina were not ignorant of its existence and esculent qualities. We submit, then, that this plant answers the conditions of Herriot's description equally as well as does the potato: indeed, much better; for the hard tenacious root of the ground-nut—so tough that the entire root, sometimes three or four feet in length, may be torn violently out of the ground without breaking—with the tubers occurring at regular intervals on its axis, presents the appearance as if they were "fixed on ropes" more nearly than do the tubers of the potato, connected, as they are, by fine and brittle fibers, and hanging in irregular bunches to the root.

We may now with confidence assume, that the description by Herriot is satisfactorily applied to its original and real subject; and that therefore there exists no obstacle in the way of a positive denial that the *solanum tuberosum* is indigenous to any part of the North American continent, or that it was ever had in cultivation by any portion of the aborigines.

Osgood Mussey.

FRESH AIR.—Gentlemen and ladies, open your windows and let in fresh air. Light, physical and moral, is not more essential to vision than air, fresh air, to health and happiness. Yet how careful are most of us to exclude it! You close up your windows, nail list around your doors, and appear to do all in your power to exclude heaven's free gift of fresh air: and the reason why thousands of people are not smothered, is that the air is so subtle it will work its way through every little crevice, so that it is almost impossible to get it shut out altogether. But if people do not get themselves quite suffocated, they continue to get pale, stupid, nervous, and heavy headed for want of pure air, which is so anxious to force itself into their rooms, but which they

contrive to keep barred out. What would, you think of a man coming down the river on a raft, who would get a basin of water and keep it for weeks to wash himself every day, when the broad river was running level with his feet? You would say he was a fool.—Are you any wiser, who have fifty miles of deep fresh air above you, and allow yourself but a few square feet to be used over and over again a hundred times? I wish every one of you knew what a curious piece of machinery your lungs and heart are, and how the atmosphere is adapted to our use. Keep your windows open night and day. If you are afraid to have the night air blow upon you while you are asleep, break a pane out at the top window until you get used to fresh air, and a stream of it hard enough to blow the quilts off the bed will not hurt you.

Olintangy Gazette.

THE USE OF FRUIT.—Instead of standing in any fear of a generous consumption of ripe fruits, we regard them as positively conducive to health. The very maladies commonly assumed to have their origin in a free use of apples, peaches, cherries, melons and wild berries, have been quite as prevalent, if not equally destructive, in seasons of scarcity.—There are so many erroneous notions entertained of fruit, that it is quite time a counteracting impression should be promulgated, having its foundation in common sense and based on the common observation of the intelligent. We have no patience in reading rules to be observed in this particular department of physical comfort. No one, we imagine, ever lived longer, or freer from the paroxysms of disease, by discarding the delicious fruits of the land in which he finds a home. On the contrary, they are necessary to the preservation of health, and are therefore caused to make their appearance at the very time when the condition of the body, operated upon by deteriorating causes not always understood, requires their grateful, renovating influences.

Bost. Med. and Surg. Journal.

NEW PAINT.—Water-lime, hydraulic cement, may be mixed with oil in the same way as Blake's Ohio paint or any of the several mineral paints lately brought into use, has lately been discovered to be equal to any other sub-

stance used for painting walls, roofs floors, fences, or any other work; while in point of economy, it is as one to eight or ten. The discovery was accidentally made by Mr. John Harold, of Hempstead, Long Island. He sent a man into a store-room to get some of the mineral paint to mix for painting a floor, and the man took of the cement barrel, mixed and applied it before the mistake was discovered. It was put on in the evening, and the next morning was found to be as dry and hard as stone. Mr. H. then tried it upon fences and roofs with like success, mixed both with fish oil and linseed. To give it severe test, he then mixed it with fish oil, and painted two oil casks, upon which it dried quickly and adhered firmly. Farmers, try it. It is undoubtedly worthy of attention.—*Plow.*

The Dawn of Spring.

THE following description of the Dawn of Spring, deals in familiar images, and will, perhaps, strike no one by its originality. But it breathes the fresh life of nature with such in-born sympathy, that it has all the effect of gazing on the landscape with our own eyes.

I love to trace the break of Spring, step by step; I love even those long rain-storms that sap the icy fortresses of the lingering Winter,—that melt the snows upon the hills, and swell the mountain brooks; that make the pools heave up their glassy cerements of ice, and hurry down the crashing fragments into the waste of ocean. I love the gentle thaws that you can trace, day by day, by the stained snow-banks, shrinking from the grass, and by the gentle drip of the cottage eaves. I love to search out the sunny slope by a southern wall, where the reflected sun does double duty to the earth, and where the frail anemone, or the faint blush of the arbutus, in the midst of the bleak March atmosphere, will touch your heart, like a hope of heaven, in a field of graves! Late come those soft smoky days, when the patches of winter grain show green under the shelter of leafless woods, and the last snow drifts, reduced to shrunken skeletons of ice, lie upon the slope of northern hills, leaking away their life.

Then, the grass at your door grows into the color of the sprouting grain, and the buds upon the lilacs swell, and burst. The peaches bloom upon the wall, and the plums wear bodices of white. The sparkling oriole picks

string for his hammock on the sycamore, and the sparrows twitter in pairs. The old elms throw down their dingy flowers, and color their spray with green; and the brooks, where you throw your worm or the minnow, float down whole fleets of the crimson blossoms of the maple. Finally, the oaks step into the opening quadrille of Spring, with grayish tufts of a modest verdure, which, by and by, will be long and glossy leaves. The dog-wood pitches his broad, white tent, in the edge of the forest; the dandelions lie along the hillocks, like stars in a sky of green, and the wild cherry, growing in all the hedge-rows, without other culture than God's, lifts up to him, thankfully, its tremulous white fingers.

Amid all this, come the rich rains of Spring. The affections of a boy grow up with tears to water them; and the year blooms with flowers. But the clouds hover over an April sky, timidly—like shadows upon innocence. The showers come gently, and drop daintily to the earth—with now and then a glimpse of sunshine to make the drops bright—like so many tears of joy.

The rain of Winter is cold, and comes in bitter scuds that blind you; but the rain of April steals upon you coyly, half reluctantly,—yet lovingly—like the steps of a bride to the altar.

It does not gather like the storm-clouds of Winter, gray and heavy along the horizon, and creep with subtle and insensible approaches (like age) to the very zenith; but there are a score of white-winged swimmers afloat, that your eye has chased, as you lay fatigued with the delicious languor of an April sun;—nor have you scarce noticed that a little bevy of those floating clouds had grouped together in a sombre company. But presently you see across the fields the dark gray streaks stretching like lines of mists, from the green bosom of the valley, to the spot where the company of clouds is loitering; and with an easy shifting of the helm, the fleet of swimmers come drifting over you and drop their burden into the dancing pools, and make the flowers glisten and the eaves drip with their crystal bounty.

The cattle linger still, cropping the new-come grass; and childhood laughs joyously at the warm rain, or under the cottage roof, catches with eager ear, the patter of its fall.

Dream Life.

Vegetable History.

HUME says it was not till the end of the reign of Henry VIII, that salads, carrots, turnips, or other edible roots were produced in England, and that they were then imported from Holland and Flanders. Queen Caroline, hence, when she wanted a salad, was obliged to dispatch a messenger thither to procure some for her. Sir Walter Raleigh carried potatoes to England in 1586*, and, having distributed a number of tubers in Ireland, they thrived there exceedingly. The potato mentioned in Shakspeare was the *Convolvulus batata*, of which Burnett says:—"Not only were fleshy roots and young leaves and tender shoots then eaten as pot-herbs, but they were candied and made into sweetmeats." In Queen Elizabeth's time, peas were taken from England to Holland, in consequence of which Fuller said of them that they "were fit dainties for ladies, they cost so dear." Beans followed very closely in passing from the Dutch to the English; perhaps they went over in the same ship. They were always, in olden times, deemed unhealthy; possibly it was because Pythagoras told his disciples to abstain from them. The opposition of this philosopher to beans arose, it is said by some, from an impression that he had got that they were the retreats for souls after death; others attribute it to their unhealthiness, while yet others say, interdicting beans, he merely wished to prevent his disciples from meddling in political affairs, votes having been formerly given by beans. Asparagus was taken to England in 1660, and a pleasant story touching its introduction is told in the *Library of Entertaining Knowledge*. A gentleman, finding it on the table of a friend, and not knowing how to manage it, ate the tough stalk and left the tender shoot. His fellow-diner was surprised, and the *gauche* guest, not wishing to show his ignorance, declared he preferred it thus, and thereby condemned himself to eat at the wrong end during the whole meal.—*Exchange*.

Shade Trees.

THESE hot days make one think of the grateful shade trees, which, by chance, have escaped the destroying ax. We have not the least disposition to be poetical, or to allow our imagination to roam through the winding,

sheltered paths of wooded lawns, or the cool retreats of embowered groves; but come right out into the dusty highway and the open fields. There is where you can estimate the value of shade trees. What a source of true gratulation it is to see the road-sides lined with trees, presenting as far as the eye can reach, interminable masses of green foliage, waving responsive to the breeze, and then to cast your eye abroad over the fields, see them well supplied with our rich forest trees, to afford shelter to the flocks and herds, and a resting place for the reapers and binders, where they draw up the bundles of grain for a seat, the while to partake of the "lunch" which the kind hearted ones in-doors have not forgotten to send, to replenish their exhausted strength.

The Lenawee County Agricultural Society gave a premium, last year, to the person who planted the greatest number of shade trees by the road-side; and it strikes us as being a most worthy feature, and one that should be universally adopted.

The general practice here, in clearing up our lands, is to cut down and sweep off everything, leaving our farms as bare as the deserts of Africa. This is a most unwholesome policy. It destroys, or rather it deprives us of, the most powerful means of creating and cultivating a taste for the *beautiful*. This, any one will acknowledge, when he sees how much trees add to the *beauty* of farm grounds. It is a matter too much overlooked. A taste for the beautiful should be cultivated, as a source of true happiness and refinement. And as a pecuniary object, trees should not be neglected. Exposed situations should be protected by a dense plantation. The farm house and out-buildings should always be sheltered on the sides most exposed by rows of trees. For this purpose, evergreens are the most profitable, as they afford a thorough protection in winter as well as summer, and are richly ornamental.

Every field on the farm should be well supplied with shade trees. No animal can take on fat or yield much milk, which is exposed, day after day, in the open fields to a scorching midsummer sun. Horses suffer extremely in such situations; and were it not for the shelter afforded by the fences, sheep would die.

The maple, oak, elm, ash, hickory and bur-

* See article. *The Potato—its Origin*, p. 490.

oak, are the most suitable for shade and ornament, among our native trees. The delicate hue and freshness of the maple and its quality of yielding sugar, makes it a general favorite. The rock-elm is one of the most magnificent of our forest trees. Its huge arms, and massive, pendant foliage, where it grows in the open ground, affording an impenetrable shade, make it worthy a place on the most sightly and prominent parts of the farm.

The *Bur-Oak* is but little known, especially as an ornamental or shade tree, except where it grows naturally. It is found on the borders of prairies, and is the main tree on the bur-oak plains in this state—lands of a

very peculiar formation, and unequalled in richness and fertility. The tree grows to the height of seventy or eighty feet, and generally with a spreading top. The bark is rough, somewhat like the swamp-oak.—When it grows thriftily, its cream colored shoots, and dark green, shining leaves, and its regular, rounded top, make it, in our opinion, one of the finest for planting, either for shade or ornament. We hope to see it introduced extensively. We have preserved all that have grown of themselves, on our farm, which is a large number, and design to increase them by planting.

Michigan Farmer.

A NEW PROJECT—NIAGARA.

NIAGARA—What is there horticultural about Niagara? methinks I hear some of your readers exclaim. Very little at present, I readily admit; but as all the world, that is, the traveling portion of it, visits this greatest and most sublime of the world's wonders,—to visit Niagara, is becoming as familiar as household words: nor is this confined to citizens of any particular section of the United States, nor even to the whole Union, but nearly every portion of the civilized world contributes its pilgrims, who come here to contemplate, wonder, and reverence the power of the Great Architect of the Universe, as here exemplified in one of his most wondrous works.

But I am wandering from the principal subject on which I set out to address you, and through you, the citizens of the whole United States. As they all visit Niagara, my object is, to provide a garden for them to recreate in, and in which they may feel that they have a right to enjoy themselves in a rational manner, as on their own territory; where they may view the majestic fall of the mighty mass of waters, and at the same time enjoy the pleasures of walking amid flowers, in a neat, well kept, and handsomely laid out garden. I propose, in short, that Congress be petitioned

to purchase Goat Island, and dedicate it to the use of the citizens of the United States; that an appropriation be made to defray the expenses of laying it out, and converting it into a place of resort for the lieges of the nation. The island is most admirably adapted for the purpose, having a fine growth of native trees, many of them beautiful specimens of their kinds.

There is no time to lose in this matter: already the saw-mills and factories of various kinds, are advancing to the attack of this beautiful spot, of which, if they once get possession, good bye to sylvan woods and shady groves in which to luxuriate, while enjoying the cool breezes, the brilliant rainbow, and the glittering dew of the mighty waterfall.

Is not this a subject worthy the advocacy of a Downing, who has done so much to improve the taste of his countrymen; will he not give the project the benefit of his powerful mind, and gifted pen? Methinks it only requires his influence to be exerted on our legislators at Washington, and the thing is done. By whose agency soever the work may be accomplished, rely on it, he will secure the gratitude of millions, and his memory will be revered ages after the body has returned to its original elements.

I might fill a volume in enlarging upon the subject, and detailing the many advantages to be derived from the carrying out of this measure. But the whole matter appears to me to be so plain, and the anticipated pleasures to be derived from the establishment of such a work are so self-evident, that it would be a waste of time, and setting too low an estimate on the intelligence of your readers, to attempt to enumerate the many benefits to accrue from securing this location, and converting it into a place of resort, where the invalid in search of health may enjoy the bracing benefits of its salubrious atmosphere, surrounded by pleasing objects in shrubs and flowers; where the gardener's judicious art may be contrasted with the stupendous works of THE GREAT I AM; where the man of business, who has snatched a few days from the toils and cares inseparably connected with his pursuits, may solace himself, and recruit his overtaxed energies, in one of the most delightful spots in the universe, and where even the statesman and politician, sickened with the heartlessness of intrigue, and the grasping for power, with which he is daily surrounded, may here find a refuge.

Let us seriously consider this proposition. Fellow-citizens! think of it—talk of it, and if possible, effect the desirable object while we have time, ere the ruthless hand of “advancing civilization” shall have transformed the native wildness and romance of this grand and cherished spot, to the base uses of usefulness. Let us endeavor to preserve this one spot sacred to the spirit of aboriginal simplicity and grandeur of nature, directed and guided, and not allow it to be transformed by the spirit of the age, into an arena for money-making utility,—to sawing logs, spinning cotton, or “washing sheep.” (!)

WM. HEAVER.

Current and Gooseberry bushes are so alike that the same culture will do for both.

Death of Trees.

MR. EDITOR :—A great deal has been said, written, and printed this spring, on the subject of trees being killed, and the killing is generally attributed to the cold of last winter. Now I am one of those singular persons that are afflicted with a curious desire to have effects attributed to the real cause, and in reflecting upon this subject, it appears to me, that the death of the paper mulberries, and other trees mentioned, may be otherwise explained. For instance, all horticulturists and arboriculturists know, that plants, particularly trees, have small fibers extending from the roots, commonly denominated spongioles, which are supposed to be the conduits through which the nourishment absorbed from the earth is conveyed to the roots, and through the roots to the body of the tree. Now these spongioles, if totally deprived of moisture, perish, and of course cease to perform their natural functions, and the tree dies for want of nourishment. Should this be the true theory, may we not with some reason infer that the loss of trees spoken of, has been occasioned by the excessive drought of last summer and fall? This inference appears to be further justified, by the fact that it is only in particular locations that trees have died. It will afford me great pleasure to read the opinions of some of your scientific and experienced correspondents on this subject, a correct knowledge of which may be highly useful to cultivators.

S.

REMARKS.—I can not indorse this theory, plausible though it be: still I like such suggestions. We all know that there are such things as spongioles, and their office is pretty well agreed upon; but, unfortunately for the theory of S., these very important mouths of the plants are generally killed off at the end of each growing season, and reproduced at the commencement of spring. Moreover, in the case he cites, that of the *Broussonetia*, it will

be found to have suffered as much where the soil is shaded and moist, as where dry and exposed. I have no better theory to advance, and shall be happy to hear from others.

[Ed.]

Toads and Insects.

Although not the handsomest of living creatures, the toad is certainly one of the gardener's best friends. Quiet and unobtrusive in his manners, perfectly harmless, and asking no privilege but that of being permitted to roam *ad libitum* through the garden, he is continually rendering excellent service. I have ever been the friend of the toads, and greatly regret the cruelty frequently manifested toward them by unthinking persons. My garden abounds with them, and a more sociable set of fellows I have rarely met with. Whenever I commence spading, the newly spaded bed is sure to be surrounded with them, watching quietly but eagerly for any grub or worm that may be thrown up.

Last summer, whilst spading some ground which abounded in the large white grubs

usually found in the vicinity of clover stalks, I observed a middling sized toad sitting near, quietly watching my operations. Presently one of the grubs was turned up, and in order to test his fondness for such food, I threw it before him. In an instant it was swallowed. As he appeared to relish the morsel, I gave him another and another, until finally he made way with seven of them, when he retired. Next day he returned and despatched six more of the grubs, which I gave him. I mention these little facts merely for the purpose of showing how large a number of troublesome worms and insects a single toad will destroy.

As some of your readers may have a cucumber bed, which the striped bug is destroying, permit me to suggest a remedy for these pests, which I have found most effectual. Between the hills, lay pieces of board sufficiently raised from the ground to enable the toads to conceal themselves under them during the day, and my word for it, the bugs will speedily disappear. Whether they are eaten by the toads, or whether their presence is so unpleasant as to drive them away, I can not say, but presume the toads destroy them.

Farm Journal.

AGRICULTURAL EDUCATION IN ILLINOIS.

Hear what the governor of this great state says in his message to the legislature, at their recent session. He seconds the Granville movement.

I have frequently taken occasion, in my communications to the general assembly, to invite attention to the appropriate disposition of the college and seminary funds. They amount in the aggregate to \$149,678, which is held in trust by the state, to be applied to purposes specifically recited in the grant from the general government. It will be admitted that it is the duty of the state to make such use of it as shall be in substantial accordance with the terms upon which it was received. This the honor of the state requires. No argument is needed to prove that this fund ought to be employed and its benefits enjoyed at an early day, when all proper means should be brought into requisition to promote the generally prosperous condition of all our citizens, instead of postponing the advantages which might be made

to accrue to a time when there would be a less necessity in the greater abundance of means which might supply its place. It is plain likewise, that in whatever way it may be used, or to whatever purpose applied, it should be so employed as to confer the most general and uniform benefit upon all. Ours is peculiarly an agricultural state, and the interests of this great and prevailing source of our present wealth and future prosperity will continue for a long time to invite an increasing share of the attention of the legislature. From the peculiar nature of the circumstances which surround the agricultural interests of a state, it does not often happen that legislative action can be made to confer any direct and positive aid to its encouragement, as its success depends so much upon the skill and ingenuity with which labor is directed and applied. The most that is to be expected by the farmer follows rather incidentally than directly, and generally the more prominent object of his desire is an open field, unshackled by intrusive leg-

islative restraints, and that he be not harassed or oppressed by greater taxation than the actual exigencies of the state imperatively demand. Whenever opportunities occur that this interest can be encouraged and promoted, justice requires that they should not be neglected. In agriculture, as in many other branches of industry, skill and science may be made comparatively, if not equally productive. The farmer, as well as the manufacturer or the miner, may turn these to a like profit and success. The few past years have demonstrated in many parts of the country the incalculable improvements which may be made in the common business of agriculture, by enlisting a more thorough knowledge and skill which have been brought to its aid. Profitable agricultural industry has been shown to be a science, and its sure success must depend in a great measure upon rules which it prescribes. The best interest of the state then requires that the fostering care of legislation shall, as far as practicable, be extended over it by bringing the wisdom and experience of others to bear upon it. A knowledge of the science of agriculture, united to the practical exertion of tilling the soil, is suited no less to elevate the dignity of the farmer than to reward him for his toil and his labor. I have thought this brief reference to a subject of the very highest interest to every citizen of our state not out of place, taken in connection with a considerate disposition of the college and seminary funds.

This subject has lately been brought more immediately to the notice of the people, through the published proceedings and report of a meeting of farmers held in Granville, in this state, during last summer, in which the propriety of appropriating the income of this fund to an agricultural college was carefully and elaborately considered.

It does not appear that the legislature, in their short session, have taken any action upon the subject.

IN MASSACHUSETTS.

At a late meeting of the Massachusetts Board of Agriculture, M. P. Wilder submitted the following resolutions expressive of the views of the committee of which he was chairman:

Resolved, That Massachusetts, by an en-

lightened policy and wise legislation, has rendered her system of education worthy of her exalted reputation, and that this Board most earnestly desire her to complete that system, by providing kindred institutions for the scientific education of the farmer, upon whom is levied so large a share of the taxes for the support of government, and philanthropic objects.

Resolved, That it is the duty, as well as the interest of the state, to aid in furnishing the means for such an education, and that for the want of this education, millions of dollars and a vast amount of time, energy and money, are annually lost to the commonwealth, by the misapplication of labor and capital in husbandry; and *resolved further*, that this loss is mainly to be attributed to the want of a proper system for the acquisition and diffusion of correct information as to the most approved arts of cultivation, and the best means of perfecting this unfailing source of independence and happiness.—*Mich. Farm.*

IN PRUSSIA.

In the kingdom of Prussia there are five agricultural colleges, and a sixth is about to be opened; in these are taught, by both theory and practice, the highest branches of science connected with the culture and improvement of the soil. Of agricultural schools of a more elementary order there are ten; there are also seven schools devoted to instruction in the culture of flax; two specially devoted to instruction in the management of meadow lands; one for instruction in the management of sheep; and there are also forty-five model farms, intended to serve in introducing better models of agriculture; in all seventy-one public establishments for agricultural education, not to mention others of a kindred nature, or those private schools where the art and science of good farming are taught.

Prussia is a monarchy, with fifteen millions of people. New York is a republic with three millions, and with a territory which, though not quite half as large, is richer and better situated, with means of transportation incomparably superior. Prussia has seventy-one public establishments to instruct her people in farming, the science of sciences, and the art of arts. New York has not one; and the proposition to establish a single agricultural college has again and again been voted down

in her legislature. Ought so shameful a contrast to exist between that monarchy and this republic?—*N. Y. Tribune.*

Gutta-Percha.

THE gutta-percha tree belongs to the natural Sapotæ family, and is a native of Borneo, Malacca, and other islands of the Eastern Archipelago. The tree, generally, attains a large size, say from sixty to seventy feet in height, and from two to three feet in diameter. Its general appearance resembles the gonus durio, or the doorian, but the under surface of the leaf is of a more reddish brown than in the durio, and the shape is somewhat different. The timber of this tree is not valuable; but the natives express an oil from the fruit which they are accustomed to use with their food.

The localities it particularly likes are the alluvial tracts along the foot of the hills in the Archipelago, where it flourishes luxuriantly, forming, in many spots, the principal portion of the jungles. But notwithstanding the indigenous character of the tree, its apparent and wide spread diffusion, it is feared the gutta will soon become a scarce article, if some more provident means be not adopted in its collection than those generally used by the Malays and Chinese. Only a short time ago the gutta-percha tree was very abundant on the island of Singapore; but already all the timber has been felled and nothing but small plants are now to be found.

The mode in which the natives obtain the gutta is by cutting down the trees of full growth, and ringing the bark at distances of about twelve to eighteen inches apart, and placing a cocoa-nut shell, or such like receptacle, under the fallen trunk, to receive the milky sap that immediately exudes upon every fresh incision. The sap is collected in bamboos, taken to their houses and boiled, in order to drive off the watery particles, and inspissate it to the consistence it finally assumes.

Although the process of boiling appears to be necessary when the gutta is collected in large quantities, if a tree be freshly wounded, a small quantity allowed to exude, and it be collected and molded in the hand, it will consolidate perfectly in a few minutes, and have all the appearance of a prepared article. The quantity obtained from each tree is about ten cabbies. It requires the

destruction of at least ten trees to produce one picul, (the picul is one thousand three hundred and thirty pounds.) Now the quantity exported to Europe and America up to this time exceeds fifty thousand piculs, to obtain which each reader may calculate the number of trees sacrificed. It would be much better to adopt the method of the Burmese in obtaining caoutchouc from the *Ficus elastica*, that is, by making oblique incisions in the bark, and placing bamboos to receive the sap, which runs out freely.

Previous to 1844, the very name of gutta-percha was unknown to commerce. The attention of a Dr. Montgomery, a surgeon of Singapore, was directed to this remarkable product of nature, by finding it sometimes used by wood-cutters as handles to their tools; and to him belongs the merit of introducing it into England, and for which he received a gold medal from the Royal Society. Since that period its admirable properties have been more fully discovered, and it is now rapidly and extensively coming into use for articles of domestic, manufacturing and ornamental purposes. In England it is much used as soles for boots and shoes, as it wears well, protects the feet from damp, and is economical. It has given employment to thousands in Europe and America, and also to the gatherers in the Indian Archipelago; and at present forms the more profitable article of export.—*Exchange.*

MOSS ON TREES.—The American Farmer gives the following as an excellent application to the scraped trunk to prevent the growth of moss, and destroy eggs of insects: One gallon of soft soap, one pound flour sulphur, and one quart of salt, to be well stirred together and put on with a hard brush.

New York Farmer.

GRASS UNDER TREES.—By sowing nitrate of soda in small quantities in showery weather under trees, a most beautiful verdure will be obtained. I have used it under the beech-trees in my grounds, and the grass always looks green. Having succeeded so well on a small scale, I have sown nitrate of soda among the long grass in the plantations which the cattle never could eat. I now find that the herbage is preferred to the other parts of the field.—*Exchange.*

BOTANICAL NOMENCLATURE.

WILL you allow me to make a few remarks on what is said on the subject of Botanical Nomenclature. I do not deny that many names given by botanists to flowers are absurd; but consider for a moment the amazing difficulty in devising appropriate names for such a multiplicity of objects.

The number of flowers known and named, exceeds, I believe, fifty thousand. Allow five species to a genus, as an average, and there are ten thousand distinct names required.—Entomology, and other natural sciences, as ornithology, etc., have appropriated, and are appropriating, names by thousands, and thus narrowing the field for botanical nomenclature. B. J. desires the advent of a botanical Lavoisier; but he has appeared already, in the person of Linnæus. Perhaps that great man's greatest gift to natural history, was his devising generic and specific names.—Lavoisier's nomenclature, as a system, is perfect, but requires almost equal perfection in the science, or it often misleads. For instance, the grand element *oxygen* itself is wrongly named. Lavoisier gave it that name, because he believed it was the chief or only generator of acid; but we have acids, as the hydrochloric, in which there is not a single particle of oxygen.

Names in natural sciences should be *neutral*, that is, involving no theory or system. Thus *carbon* is an excellent name. It is short, easily remembered, formed from the Latin, and involving no theory. Such should names in botany be:—1. As universal names, *i. e.*, not limited to one language or nation; they should either be compounded from the learned languages, or have an allied form. 2. They should be tolerably short, so as to be easily remembered. 3. They should be free from all distinctive peculiarity of nation, so as to avoid what is called barbarism. Such names as *Vieusseuxia* (French), *Fuchsia* (German), *Wrightia* (English), should, therefore, be always avoided. 4. And, lastly, they should be *neutral*, and involve no theory or circumstance which may be found erroneous. Tested by these signs, *Vanda* seems to me a very good name. It is of a form, though not classical, yet allied to it. No European nation would find any difficulty in pronouncing *Vanda*. It is short and easily

remembered. It is neutral; and, what is an advantage to travelers, it is the native name. Compare with *Vanda* such names as *Geissomeria*, *Stigmatophyllum*, *Striptanthera*, and see its superiority. A child can learn and remember *Vandaveres*, but a grown up person might be perplexed with *Sericographis Ghisbreghtiana*.

Names, however, like other things, present difficulties to the young beginner, which disappear with attention and progress. A merchant once said that he had more trouble to get the first five hundred pounds, than the last fifty thousand. So in botany—the first fifty or one hundred names are the main difficulty. An excellent way of learning the names of flowers is to have them always distinctly labeled; and, if a tyro in the classics, get a learned friend to pronounce the names, till you fully associate name and plant together, you will then have no more difficulty with *Stephanotis floribunda*, *Tasconia pinnatistipula*, *Hubrothamnus fascicularis*, and other such charming beauties, than with *Ranunculus*, *Anemone*, *Fuchsia*, or *Dahlia*, or even *Violet*, and *Primrose*. Again, when you see in the gardens and green-houses of friends a new plant, *i. e.*, new to you, write its name correctly down in your pocket-book. As opportunity offers, consult some figured botanical work for its representation. Name and figure will thus be associated in your mind; and whenever you see the plant again, it will be recognized with delight, as an old friend. This may lead into a little study of the beautiful science of botany; and when the elements are fairly mastered, and you are launched in this sea, you will perceive in flowers, and in their very names, a beauty and interest before unknown, and will treasure up an inexhaustible source of pleasure and delight. I do not fully justify the name of *Chorozema*, to which your correspondent alludes; but still I think there is some advantage even in the circumstance that the association of ideas will fix indelibly on the memory that it is an Australian plant, and being a genus of a tribe closely allied to *Hovia*, *Kennedya*, *Bossiaea*, etc., will be a clue to the fact that such are denizens of that arid yet interesting continent.

A LOVER OF FLOWERS.

[We think our correspondent has made out a stronger case than we did, against botanical names; and we do not admit that any one of the pleas in defense of *Vanda*, or *Chorozema* is admissible, except that the first is short. The most remarkable feature of plants should be that on which both their genuine and specific names are founded, such as *Amaranthus flavus*.]—ED. COT. GARDENER.

DRYING FRUITS.—It is now time to commence drying and preserving fruits, and we hope our friends will not forget to aid each other by suggesting the best methods. Currents, cherries, and indeed most kinds of small fruit, can be very nicely dried by scalding them with sugar in the proportion of one pound of sugar to from four to six of fruit. They retain their flavor remarkably well, and cook much more readily than when dried without the sugar.

TOMATOS.—We ate some very fine tomatos not long since, which were dried in the following manner. The fruit was taken when fully ripe, and scalded, then strained through a sieve, and after slowly cooking over the fire for half an hour, it was spread on clean plates and dried in an oven, the whole process requiring but about two days before the fruit was ready to pack away.

Tomatos may be kept very fresh by taking them when fully ripe, and putting them in a tin-can capable of being hermetically sealed. Leave the can open, and place it in a kettle of boiling water; keep the rim above the surface of the water till the whole is scalded through. Add a little salt, and then seal closely. Tomatos thus kept, open in the spring as fresh as they were when sealed.—*O. Cult.*

THE PEACH GRUB.—A. C. Lewis, of Washington, D. C., has succeeded in making a preparation which it is said effectually destroys the Peach Grub, gives vitality to the tree and enables it to bear twice the quantity of fruit, which is usually produced, and that too of the best quality. The preparation is a chemical paint, which is applied to the tree near the root. The article is highly recommended by those who have used it. The editor of the Washington Republic has visited orchards where it has been tried, and represents its effects as being all that could

be desired. Our peach grows so well, that those engaged in cultivating other fruit should give it a trial; and if it operates as represented, it will be worth thousands of dollars to our states,—it being claimed that trees to which it is applied will last twenty years instead of merely three or four as at present. Mr. Lewis, the manufacturer, is a very extensive peach grower, and this preparation more than answered all his expectations. It can be procured of Mr. L. at \$7 per barrel of 30 gallons, delivered on board of steam or sailing vessels, and canal boats at Georgetown, or the cars.

The following is the mode of application:—The earth should be removed from about the trunk of the tree down to the upper roots, where it can be applied with a common paint brush, for the space of about three inches, and to the roots which may be exposed. A small quantity should be mixed with the earth near them. It can be applied at all seasons, the sooner the better.—*Wilmington Republican.*

LIME IN OLD GARDENS.—Old garden soils which have been very liberally manured sometimes become sour for want of alkali, and in such cases the use of lime and even of quicklime, is judicious. The decomposition of fetid matters is thus secured, and the acid products of previous decompositions are neutralized, while the soil is rendered more pulverulent, and less inclined to cake from extreme heat or moisture.—*Ohio Farmer.*

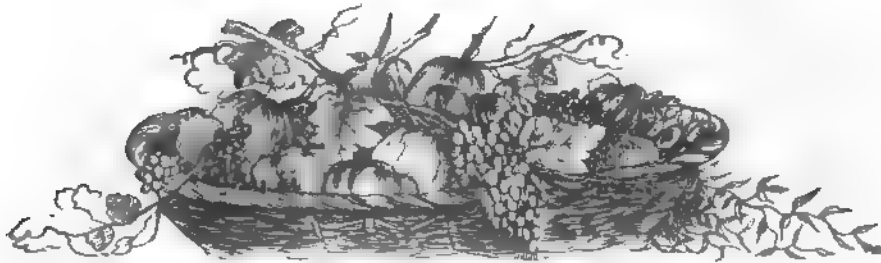
THE PROPER TIME FOR PRUNING.—A correspondent makes some inquiries relative to the proper time for pruning apple-trees, and remarks that it has been the general practice to prune in the spring. Very small limbs may be safely cut off at any season whenever it is convenient; and when the trees have the proper care and attention, it will seldom be necessary to remove any large limbs. But there are many trees which have been badly neglected, and large decaying and profitless limbs should now be removed from them; and where this is necessary, fall is a more suitable time than the spring, for the reason that the wounds made in autumn will remain dry and sound for years, and until the bark closes over them, while wounds made in the spring turn black and decay, leaving holes which frequently ruin the tree. Mr. Cole,

the author of the American Fruit Book, prefers October, November, or even December, to the spring, which he says is the worst season.

"Just thirty-two years ago, in September," he remarks, "we cut a very large branch from an apple-tree, on account of injury by gale. The tree was old, and it

has never healed over; but it is now sound, and almost as hard as horn, and the tree perfectly sound around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put into the cavity.

Maine Farmer.



Pomology.

CHERRY FESTIVAL.

On my return from the National Agricultural Convention, at Washington City, on Tuesday, June 29th, I had the good fortune to find myself a fellow-passenger with sundry baskets in the possession of F. R. ELLIOTT, of Cleveland, Ohio, whence he was bringing a choice collection of the famous fruits of that famous fruit region, to show them before the Columbus Horticultural Society.

As may be imagined by all pomologically interested, the temptation to enjoy the pleasures of the last year's *Cherry Festival* was too strong to be withstood. The occasion presented so good an opportunity for further study of several new varieties, that it was gladly embraced. The members of the Columbus society were soon rallied, and a beautiful array of about thirty varieties of this brilliant fruit, and some handsome bouquets, were soon spread upon the tables, and judiciously discussed by the knowing ones present.

The varieties were almost the same as

those shown from the same source last year, but it afforded a renewed occasion to judge of their respective merits. Among those which were most admired, were Governor Wood, Kirtland's Mary, and Belle de Choisy. Those who preferred the firm-fleshed Bigarreus, voted for the Rockport, Cleveland, and Elton; but those who considered the "useful" or market properties, with a rich sweet character of fruit, could not fail to be struck with the Black Hawk.

More Cherries.

Soon after returning from Columbus, and while the flavor of Black Tartarian, Bigarreau, Belle de Choisy, and all the other *chêris* cherries, was fresh upon the palate, a kind friend dropped in, with abundant samples in a fine state of preservation, which he, CHARLES SIEWER, had just received from Lancaster, Pennsylvania.

This collection unfortunately arrived just too late for exhibition at our Horticultural

Society, but a committee was promptly assembled to discuss their merits.

The Bigarreau was a remarkably prolific variety, as a portion of stem eight inches in length weighed fourteen ounces; it was indeed crowded remarkably. The flesh was rather firm, but it had been picked a little too soon. The variety was not Napoleon, as marked; at least, so decided the committee aforesaid, though even committees may be fallible. The other varieties, marked English Morello, Kentish, and Late Duke, were admirable specimens of acid fruit, well matured and in good condition; but there was noticed, by observant eyes, a most remarkable similarity in the characters of their several stones, as well as in the flavor of their agreeably acid juice. Some of the committee even suggested that the three specimens might have been plucked from one individual tree.

A vote of thanks was, however, acclaimed to Mr. Siewer for the opportunity he had furnished of eating some fine Pennsylvania fruit.

Mulching Gooseberries.

JOHN B. RUSSELL, Esq.—

My dear Sir,—I beg your acceptance of a small sample of gooseberries, from my garden, which, from their fine size and flavor, as well as their perfect freedom from rust or mildew, will prove, that, by proper cultivation, this delicious fruit may be raised with perfect ease, and in the highest perfection. I remember, several years since, while you were visiting us, that you suggested the use of soapsuds, or some alkaline wash, as a remedy for the mildew or blast which has so generally affected this fruit, and for the prevention of which many applications had been used, but without success. I tried them all, but in vain: scarcely a berry out of hundreds would escape the rust, and many of my bushes dwindled and became worthless.

Some years ago, observing the extremely luxuriant and profuse growth of the off-shoots or suckers, in the early spring and during the fruiting season, which the gooseberry bark put forth, and that the rust never made its appearance until they had attained some size, and in such quantity as to abstract a large proportion of the nutriment afforded by the root, an idea occurred to me, that the diseased condition of the bush and fruit, was the result, not of moisture, or sun, an insect ravager, or want of adaptation of soil, but simply a *lack of nutriment*, or in professional phrase, an *atrophy* of the plant and fruit, by reason of the large proportion of sap consumed by an useless amount of woody fiber and leaf, and which was necessary for the full and perfect development of the fruit. Acting upon this impression, I pruned very liberally, and throughout the fruiting season leaving no more wood than what bore fruit, and carefully removing all shoots having a light green color, and very rapid growth. My success has been perfect, and whether in the open sun, or under shade, I never fail of an abundant crop of fine fruit. My only preparatory cultivation, is, mulching the bushes with rich compost every winter and spring. The bushes from which these two varieties are plucked, I obtained from our friend Elliott. I have lost their names.

If these remarks are of any value to any of your horticultural friends, please use them as you deem proper. Truly yours,

JOHN N. BROWER.

LAWRENCEBURG, IND., JUNE 24, 1852.

A NEW PEACH.—Mr. Samuel Redfield, of Randolph, Portage county, exhibited several peaches at the Ohio State Fair, which he states were produced from a seedling tree which possesses the remarkable quality of ripening its fruit about the middle of August and continuing to ripen in succession till the last of September. The peach is quite large, of a cling-stone variety, of handsome appearance and good flavor, with rather a large stone.

POMOLOGICAL CONGRESS.

EXTENSIVE preparations are making in many of the states, to forward the objects of this great convention of Fruit Growers; the circular of which appeared in a previous number, and which has been printed in many of the newspapers throughout the country.

The state committees are actively engaged in preparing valuable matter for their reports, which will be of great interest. The indefatigable LAWRENCE YOUNG, of Kentucky, is actively directing the attention of his colleagues to the influence of climate, aspect and elevation. In Ohio, the State Convention, to meet at Columbus, the last of the present month (August,) will prepare their report, and so will other states; especially will Pennsylvania be prominent, as promised by the Farm Journal. And hear what DOWNING says in the Horticulturist:—

This will be the third session of the Congress of Fruit Growers—the first having been held at New York and the second at Cincinnati, and there are several reasons why we are led to believe that it will be the largest and most interesting meeting of the kind yet assembled. In the first place, Philadelphia, being in the heart of the Middle States, is more centrally situated than any other place that could be selected. In point of climate and variety of horticultural products, that city stands midway between the North and the South, between New England and the valley of the Mississippi. She stands in the very center of the great peach district, and we notice with pleasure that the time of meeting has been fixed earlier than usual, partly no doubt with a view to a more extended exhibition of this most delicious of all fruits. Perhaps it is still rather late, but we hope by the aid of ice-houses and fruit preservers it will not be found materially so. Baltimore and Washington can, as we know from the evidences of our own senses, show specimens of this noble fruit that will make Northern pomologists feel a sinking of the heart, and the eastern shores of Maryland, from all that we learn, can produce samples of pears that will awaken the

competition of the well tried pomologists of Massachusetts.

As Philadelphia is pre-eminently the focus of beautiful plants, and as the Congress will meet in the Chinese Museum building, which is the familiar exhibition ground of the Pennsylvania Horticultural Society, we may expect to have the cornucopia of Pomona gracefully festooned by the loveliest garland of Flora. There can be no doubt that, altogether, the meeting will be one of no ordinary attraction to all the devotees of Horticulture.

And, having said this for the merely superficial interest of the meeting, let us glance at the deeper meaning and more intrinsic value of this biennial gathering of the fruit growers of the whole Union.

Anybody may learn horticulture on his own account, without going to school or taking lessons from masters. Most persons in fact do so, practicing in their own gardens in the traditional way handed down from father to son, from one generation to the succeeding one. They may even, by the aid of books and practice together acquire, a very high degree of knowledge in the matter. This is being self-taught in the art, and with many pleasures, there are, of course, many drawbacks and errors in this mode of acquiring information.

Horticultural societies and journals of horticulture may be considered the common schools of the art, where, by the help of practice at home, prizes and competition in public, and stated rehearsals of all the best talent exercised on the soil, the competitors are stimulated to new exertion, and the taste of the local neighborhood is carried forward and raised to a higher level.

A national congress of cultivators, like this Pomological Congress, takes a still higher ground, and may fairly be considered as the university of horticulturists for the country at large. It is, in the first place, composed mostly of picked men, sent as delegates by all the horticultural and agricultural societies over the whole country. They are men of the widest and most thorough experience in the respective districts to which they belong. They bring with them the ripest knowledge, gathered in the fields, orchards, and gardens of their respective States. They exhibit

specimens of the products of our widely diversified soil and climate, to show what each State can produce, both naturally and by the aid of high culture, and a more beautiful and interesting display, it is not easy to find in any country.

But the interest of the thing does not, as in most horticultural societies, the common schools of horticulture, stop here. In fact, it just commences where those of the societies end. It commences by the discussion, free to all interested in such topics, of the various subjects within the scope of the Congress; such as the culture of the fruits generally, the comparative merits of different varieties, the unanimous or partial condemnation of others,—interspersed with lively descriptions of various modes of cultivating, and different degrees of success or failure; all which have the deepest interest for every man who owns a patch of ground which he either cultivates or hopes to cultivate.

When we add to this that most of the speeches are made by men who are really the yeomanry of the country, who, though they deal in few flowers of rhetoric, illustrate their strong positions by "showing their hands," with good fruits in them, as the best proof of what they and mother earth can do; men whose opinions may lastingly damn or establish the character of a pear, but who at least never "pair off" (like their namesakes in the Capitol) to avoid giving their honest opinions.

Judging from the previous sessions of the Pomological Congress, we have no fear of lack either in interest or numbers at Philadelphia. All that we fear is that the members will come with plenty of ideas, but ideas badly arranged and digested. As it is true that the great majority of delegates sent there are men who are full of experience, and precisely that experience which it is desirable to get out of them for the good of the public, it is no less true, according to our observation, that they are not in the habit of condensing their thoughts or so arranging their ideas as to present their experience in the shortest and clearest manner. This is all from the want of the habit of turning the subject over in their own minds, and so putting it in order that they can most clearly impart their knowledge and experience to others. It is also true that many whose duty it is to report to the Congress on the condition of the

fruit culture of their own district, neglect to prepare or arrange any materials till the very week of the meeting, or perhaps till the very day when it takes place. Hence, much of the general value of the comparative results are lost to the assembled body, because they can not be digested and prepared by the chairman till the meeting is over. We state these facts now for the purpose of urging them upon the attention of the chairmen in the different States, and begging them to make memoranda and collect materials for their reports from this moment, that of the ripening of the earliest cherry to the time of the meeting itself.

Now that the fruit growing of the country is no longer a pleasant pastime merely, but produces many millions of profit to the country at large, it is worth while for the leading cultivators to remember that their biennial Congress, which, as we have said, is our horticultural university, is about to assemble this season, and every one interested is expected to do his duty in the furtherance of all the interests which it seeks to advance.

TREATMENT OF STRAWBERRIES BEFORE FRUITING.—The advantages of irrigation have been shown, but where this can not be adopted in practice, mulching is a good substitute. The following mode of treatment, described by J. Cuthill, in Hovey's Magazine, is practiced by Joseph Myatt, the celebrated strawberry raiser, and by himself. Having no water near him, Mr. Myatt depends entirely upon the immense quantity and the quality of his manure for keeping his ground moist, together with a good coat of straw; but where manure is scarce, perhaps my plan, which I have practiced for many years, would be the best. I always mulch between the rows with fresh straw, mixed with horse droppings, laying it on at least an inch in thickness, just when the plants are coming into flower; and if the weather is dry, I water frequently, but not after the flowers are set. By the time they are ripe, the strength of the manure is washed down among the roots when they most want it, leaving the straw clean and sweet.—*Exch.*

ALWAYS do as the sun does—look at the bright side of everything. For while it is just as cheap, it is three times as good for digestion.



The Garden.

REMARKS ON THE CULTIVATION OF ASPARAGUS.

In the last May number of the Review, on page 369, is a discussion respecting the culture of the asparagus, by the members of the Cincinnati Horticultural Society, in which the President read, among others, the following:—

"Among all the productions of the garden, I know of none more abused, or cultivated with so little regard to horticultural skill, and the true principles of physiology. Errors deeply rooted seem to have prevailed from time immemorial, and appear to be strongly riveted by time. The result is, one of the most delicious and wholesome vegetables, when properly treated, has been rendered almost worthless, except to sell."

This is certainly very true; but most of the remarks concerning the culture of said vegetable, as they were given in the discussion by the different members present at that meeting, differ so materially from the results at which I have arrived, that it may perhaps be useful to compare them.

If one single plant of asparagus is planted in ordinarily good soil, and attended to as other garden plants usually are, and if unlimited space is given to it, it will, in four or five years, form a large bush of twenty or thirty stalks of the thickness of a man's finger to that of a thumb. If the length of the roots of this plant are examined, they will be found to extend from ten to fifteen feet from the crown of the plant, making a circle of from twenty to thirty feet in diameter; the head, if allowed to grow naturally, will not be found more than three inches beneath the surface

of the ground. Why do gardeners crowd such a large plant in small beds, allowing only two or three square feet of ground to each, and plant them so deep, that it takes all the tenacity of the plant to live, to keep it from dying through want of air?

Whenever this plant is met with in a wild state, it is found chiefly on the banks of rivers, or on the sea-coast, where a plentiful supply of water is always within its reach; it is even found in great luxuriance, on land occasionally overflowed. I have myself found that water standing on asparagus beds for several days, increased their growth, and a similar observation of an asparagus bed being overflowed for several weeks without injury, is recorded in the *Verhandlungen der Berliner Gartenbaugesellschaft*, and with those facts known and on record, gardeners and authors of garden-books still recommend dry land for asparagus.

The course followed in planting my asparagus was, according to the above stated facts, simply as follows. The land selected, is rich alluvial bottom, naturally moist; this spot was plowed twice, early in the spring, between sixteen and eighteen inches deep, and well harrowed, then laid off with the plow as is usually done for corn, four and a half feet each way; in the point where the lines intersect each other, a root is planted with the spade, at such a depth as to have about three inches of soil above the root. As soon as the weeds appear, they are destroyed with the

iron harrow or plow, and for the rest attended to like a cornfield. In this manner, every plant has twenty and a half square feet of ground, which is close enough, and perhaps too close.

This bed, planted with roots two years old, *without any manure whatever*, gave fair asparagus the second year after planting, and has now been yielding, for five years, abundant crops of as fine asparagus as come to market, and much superior in quality and flavor to that raised with manure.

Asparagus may be benefited by the addition of a moderate quantity of manure or salt; but if space is given, it can be raised very well without it, and is then easily kept clear of weeds, and therefore it can be raised cheaply. It should be grown by acres, and not in little beds; it is very well adapted to field culture, few plants can be so easily cultivated on a large scale, and pay so well. From one hundred and fifty to two hundred dollars, is, according to our prices, a moderate estimate of the product of one acre.

That green asparagus, cut when about four or five inches high, is better than when white, will be admitted by those who have tried it, and it is also much easier to cut; but the public must be informed of it, and gardeners must begin to exhibit it in that state, and they will soon find ready sale for it.

NA. RIEHL.

ST. LOUIS COUNTY, June 23d, 1852.

Notes from New York.

DR. WARDER:—It has been many a long year since we dispensed with a knife in gathering asparagus,*—snapping off the heads of the stems with the thumb and finger; and when brought to the table, Cobbet's Nova Scotian (if present) would commit no blunder by beginning at the wrong end. It is a great saving of labor for her who gathers it, as well as for him who eats it.

* See volume II, number 8, page 369.

Asparagus officinalis is found wild on the sea-coast of Europe; and seems to be as well adapted to the shifting sands of such localities, as the camel is to the deserts of Asia and Africa. One spring, our hotbed was accidentally built over an old root; and after a time the stems came up into the bed, having forced their way through the whole thickness of earth and manure—not less than four feet.

The largest asparagus that I have seen, grew at Montezuma, in this county, near the salt works, in a sandy and gravelly soil. People often mistook it for a superior variety; but the proprietor told me it was only the common sort in a soil adapted to its wants. It appears to require salt as much as the live stock on our farms.

I planted *Funkia undulata* and *Spirea japonica* in a rich soil rendered still more so by muck from the woods; but after remaining there three years, neither did well—the former not flowering at all, and the latter but very imperfectly. Two years ago, however, I removed them in *laurel earth*; and though seemingly not half so fertile as the border from which they were taken, both are coming beautifully into bloom. They also bloomed last year.

Fortune's Double Yellow Climbing Chinese Rose has just given us three flowers for the first time. The size is about medial, not very double, and the color a light blush on a pale yellow ground. One was less marked with red. We have many roses which singly taken, are more beautiful; but I think we have none, which on a tall post would be more attractive. It may be doubted, however, whether it would gain such an elevation in this latitude.

The *Chromatella*, which a valued friend at Petersburg, Virginia, assures me, becomes a strong bush in that climate,—shows but little disposition to *aspire* in our shorter and cooler

summers; and it is quite probable it may prove so with our new Chinese exotic.

A generous friend at Union College, had sent me a cutting of this rare plant, and one of the buds had *taken*. On the approach of cold weather, I protected it with evergreens; but when these were removed in the spring the bud was *dead*, but not the wood on which it grew; and I had some hopes that new ones—one on each side—could be *forced-out* by allowing no others on the stock to grow, as I had once observed such a result on a cherry sprout. After a few weeks, and after the stock under the pruning-knife could do nothing more, the two buds, as hoped for, came forth and produced two fine stems. In due time these were *layered*. D. T.

CAYUGA COUNTY, NEW YORK.

Chicory as a Winter Salad.

THE leaves of this plant make a famous salad, and their value for this purpose can not be too often brought before the public. They have everything in their favor to recommend them as a substitute for endive, which, at best, is inferior as a bitter, and it is far more troublesome to grow and keep. First of all, however, a demand must be created for such things. They must be asked for by the public. Growers will not speculate on what they can not sell, and owing to our late mild winters, curled endive has become so cheap and so good, arising from the superior manner of treating it to what used to be practiced, that it is the only favorite as yet.

Wild or uncultivated chicory is to be seen all over Britain during the months of July and August. The stems rise two or three feet in height, and the branches are furnished with long dandelion-like leaves, the blossoms being blue; planted in rich earth, however, the stems often grow six feet high, and form a large bushy flowering plant, which would form no mean ornament to a border or shrubbery.

The heaviest root I ever grew was three-quarters of a pound, and its length fifteen inches,—in fact it was as large as a fine stick of horse-radish. The seed of chicory ought to be sown about the first of June, if the soil is light and the situation warm; but should the soil be strong and retentive, it ought to be

sown in the middle of May. I have found by experience, that if too soon sown, it will run to seed. The ground having been well dug, drills should be drawn one foot apart, the seed sown as parsley is, and about the same depth. When the plants are up, thin them out to one foot apart in the rows, leaving if possible, the broadest pointed leaved ones. Nothing more is necessary than to keep them clear of weeds. Should any run to seed, pull them up when they have done growing; in November the roots should be dug up and stored like beet root. In cutting off the leaves care should be taken not to injure the center, from which comes all the salad.

In 1836, I had a quantity of mold put into a cellar, in the shape of a bed, and planted with chicory roots as soon as they were taken from where they had grown during the summer. I planted three hundred roots in the bed, keeping them four inches apart, light and air being entirely excluded. They soon began to grow, producing fine cream-colored leaves, and when about six inches long, I sent them to table as salad, cutting off the leaves carefully; for if you cut into the quick, it would stop a second, third, and fourth crop of leaves which a root produces, until its cells are as empty as a honeycomb, or until entirely exhausted. From the number of plants in my cellar, I could have supplied ten families such as mine; but it was not until the occurrence of the severe winter of 1838, that I sufficiently appreciated the use of chicory as a salad. The frost and snow were severe; all endive, lettuce, celery, etc., became rotten. Nevertheless, our salads were the very best in London. Every one who dined with my employers, inquired what it was they so much liked, and every one ordered it to be grown afterward.

Twelve years ago, when I came to Cumberwell, I grew the roots with a view of introducing it as a salad into Covent Garden market. I had it planted in a pit where there was a flue, and I covered the glass with mats to exclude light. I also had five or six roots put into a large sized pot, and inverted another pot over the heads, stopping the hole in the bottom of the top pot. This is an easy plan, and it answers well for a small family, just introducing a few pots into heat anywhere. In the winter of 1839, or early in 1840, I carried to market a basket of this fine salad, tied up into sixpenny bundles, a price which I thought would pay well. No one had

ever seen it, no one had heard of it, and no one would buy it; an old herbalist (Mr Steptoe) examined it; he was a buyer of dandelion leaves, and all sorts of things for foreigners. He bought all my chicory leaves, and paid 9s. for them, but he could not sell them. Next morning he said, "'Tis of no use bringing these things, I have only sold a few bunches to foreigners." Then I said, "Take the lot this time for nothing." He did so a third time, with no better success; then I gave up its culture, pitying poor John Bull for despising the finest of all salads, the best of all tonic bitters, and that too, at a fair price. I am in hopes even now, to see it yet however, largely brought into public markets. It often takes many years' hard fighting, to persuade people for their own benefit. In the various places in which I had lived previous to my paying attention to chicory, I had been continually annoyed by ladies and gentlemen who had traveled abroad, telling me how much superior foreign salads were to English ones. The broad leaved Belgian chicory is the best for salad.—*Gard. Chron.*

Cabbages.

THE cabbage has lately been chemically examined, in consequence of the failure of the potato, with a view to its substitution for that root. It is found to be richer in muscle-forming matter than any crop we grow. It contains more fibrin or gluten, of which substance the muscles are made, and hence is richer in the material essential to the health, growth and strength of the animal. Wheat contains about twelve per cent. of it, beans twenty-five per cent., but dried cabbage contains from thirty to forty per cent. of this all-important material, of which the principal mass of the animal structure is built.

An acre of land will produce forty tons of cabbage; one acre of forty tons of drum-head cabbage will yield fifteen hundred pounds of gluten; one acre of Swedish turnips will produce about thirty tons, which will yield four hundred pounds of gluten; one acre of twenty-two bushels of wheat will yield two hundred pounds of gluten; one acre of twelve tons of potatoes will yield five hundred and fifty pounds of gluten. Here is the variation in our general crops, as to the amount of this gluten, this special kind of nourishment, this sustaining principle; which accounts for the preference given by experienced farmers to

the cabbage as food for stock and milch cows.

The cabbage flourishes best in a moist, rich soil, such as reclaimed swamps; it is more hardy than the turnip in incipient growth; and at a stage when the whole fields of turnips are liable to be swept off by the fly, cabbage plants enough to set an acre can be effectively protected under a few panes of glass, or a yard or two of gauze in a frame in the garden.

It is best for those farmers who plant cabbages, to raise the plant from the seed carefully in their gardens, in beds like onions, and then transplant the sprouts, when about six inches high, to the field.

In the early stage of growth the cabbage requires careful cultivation, most of which, however, may be done with the plow and horse hoe; as soon as the leaves expand and shade the ground, weeds are effectively prevented from growing enough to injure the crop or propagate their seed. This leaves the field in as fine condition for the next crop as could be desired.

Cabbage roots should have plenty of room to shoot away down. The ground for them should be deeply spaded in a garden, and plowed in a field.

Any rich compost or well rotted manure is good for cabbages; coarse or unfermented manure is not good. Ashes, plaster of Paris, bone dust, and poudrette, and a little salt will be found beneficial; but above all, if our farmers could save the urine of their stables and apply that, mixed with two-thirds of rain during a shower, just on the top of the ground, they would find the cabbages grow to a very large size, and with firm heads. This plan of manuring has been long practiced by the Dutch, English and Scotch gardeners.—*Scientific American.*

Annuals for the Garden.

ANNUALS are calculated to effect much in the summer decoration of a flower-garden: their variety is great. In habit, in foliage, in the color of their flowers, they exhibit a great diversity, and from among them may be selected such as are suitable for all situations, and to please all tastes. But no plants are, as a general rule, worse treated than annuals. Because they are for the most part easily obtained, and as easily raised, they receive but a scanty amount of attention, certainly not of

a nature to develop their proper character and value. As generally met with, they are weak, straggling, and weedy, easily damaged by rain and wind, and generally of but brief duration; yet if proper attention is afforded them in the several stages of their progress, they become highly effective and useful, both for cultivation in the open borders, as well as for pots. Many of the kinds are admirably adapted for "massing."

We shall now only speak of hardy kinds, such as may be sown in the borders where they are to flower, or in a reserve garden, and be afterward removed to their permanent situations. When sown where they are to flower, the prevailing practice is to allow them to remain too thickly, smothering each other in their struggles for light and air, inducing a premature maturity, which of course is followed by their speedy dissolution. As soon as they are fairly above the ground, thinning should commence, and be progressively followed up, till in the place of fifty or more plants, perhaps only five remain. Of course the distance at which it will be necessary to leave them, will depend on the kinds, and on the richness of the soil. But the best system with the hardy kinds, is to sow them in a spare piece of ground, and prick them out as soon as they are large enough, and only removing them to the flower borders as vacancies may occur, or as they approach their flowering state; and by thus treating them, a good succession is always attainable,—a point of no mean import, where they have to be depended on for a principal item in the summer display.

In sowing them, a somewhat poor soil should be chosen, and when of a sufficient size to handle, choose a level spot, which can be shaded during the hottest part of the day, and after thoroughly beating or rolling it, to produce a hard surface, place upon it a layer of compost, chiefly composed of leaf-mold, in which plant the young annuals a few inches apart. With proper attention to watering and protection from insects, their progress will be rapid; abundance of roots will be produced, and the hardened surface beneath will preserve the roots from penetrating too far to hinder their being transplanted safely. Here they will always be ready for removal to their blooming places. No check will result from their removal, if the most ordinary care is observed. Scarcely a root will be lost in the

process, and they become effective at once. Should they not be required till fairly in bloom, they may be as safely removed then as at any other time.

It will be obvious that by a little attention to successional sowing, a supply of good plants may be obtained, from the beginning to the end of the season.—*Gardener's Journal*.

Preparation of Soils for Potting.

I WILL take the opportunity to make a few remarks on soils, which is perhaps one of the most important considerations which can occupy our attention; for without a due supply of soils of all descriptions, properly aerated and prepared for immediate use, success in growing plants of all kinds subjected to artificial treatment, can only be considered adventitious. It is generally allowed by all good cultivators, that soils for pot purposes should undergo a long process of preparation; and as the present is a good season for getting them together, I am inclined to believe that a few remarks deduced from practice, may not be out of place. I propose to treat of them under their several heads; and first,

Loam.—The goodness of this important soil is mainly dependent on the substrata from which it is taken. The best for all plant purposes I have ever met with, was three inches taken with the turf from a meadow situated at the junction of a deep substratum of gravel, with one of clay: the loam itself was nearly two feet deep, and the subsoil good enough for many garden purposes. This loam was carted home in dry weather, and stacked in a deep ridge, turf downward, about six feet high, and resting on a base of four feet. It was full of fibrous roots, very soft and unctuous to the touch, rather sandy, and possessed in a remarkable degree, the indispensable quality of not running together or binding, when wetted. It is desirable to secure a loam possessed of these qualities as nearly as possible. A loam from the top of gravel is better than from the top of sand, or clay, or chalk. If it lies deep on chalk, it is next best: that from sand is often very poor, and, if the sand is fine, liable to run together; so that I would prefer a good loam from the top of clay to it, as we can always add coarse porous material. As a general rule, from two to three inches, is quite thick enough to cut it.

Peat.—This is more difficult to obtain of

that genuine quality, that cultivators of hard wooded plants delight in. Many, indeed, confound bog, or decayed marsh vegetation, and alluvial deposits, with peat; but they are as different in quality, as in the effects produced by their use in cultivation. Bog often runs very deep, peat suitable for plant purposes, never,—sometimes not more than two inches deep on a gravelly subsoil. The best, however, is that which is full of fiber from decayed beath roots and moss, from four to six inches deep, on a sandy pebbly stratum, resting on gravel.* This should also be carted home in dry weather, and stacked the same as directed for loam.

Leaf-mold.—This soil, in its importance to plant growers, is second to none. It should never be used under three years old, and four is better. The first year the leaves should be thrown together in a large heap to ferment. The next year it is removed to the soil department, and kept aerated by frequent turnings; and the third year it may be used, but is better the next.

Rotted stable manure is another important soil, which must also be prepared by frequent turnings and aëration, for use the third and fourth years. Nightsoil must also be prepared by the foregoing category, and mixed with peat charcoal: the third year it may be handled for potting purposes—by the non-fastidious. Cow's dung, sheep's dung, and pigeon's dung, should be prepared by the same routine, and although not indispensable, are highly useful to be kept in stock, where a strong luxuriant growth is desired.

Another most important ingredient is charred earth.† No plant growers should be without this most important ingredient in soils, as there are hardly any tree-growing plants but delight in a portion of it, mixed with the compost. We use it with great success, for calceolarias, pelargoniums, picotees, carnations, cinerarias, fuchsias, and a variety of soft-wooded plants. It is not difficult to procure, as there is always a great quantity of rubbishing wood, the prunings of trees and shrubs, every season. They should be collected in a suitable place, and once a year, if not oftener, a great bonfire made, so as to

lay a good foundation, and afterward heap on alternate layers of wood and soil, and it will smolder away for weeks, and is fit for use as soon as cold.

Road dirt, or the scrapings of roads, formed of gritty sandstone, is another very important soil, and if carefully collected, will be highly impregnated with the droppings of horses, and other beasts of travel.

Charcoal, whether purchased or home-made, must be kept in stock, being useful for many purposes, but principally so for mixing with the drainage of flower-pots. Silver sand must not be forgotten, and with plenty of moss and crocks for drainage, will complete the list of requisites for good cultivation, where an extensive cultivation is kept up.

The proper application of these different soils, can only be learned by practice and experience. As a general rule, all soft-wooded, free rooting plants, should have strong ingredients to assist the growth. Heaths, and most hard-wooded green-house plants of a like nature, will flourish best in pure peat. Some, however, which both root and grow freely, will bear the addition of a trifle of loam and leaf-mold; a small portion of charcoal mixed with both soil and drainage, is also very useful to these plants. Soil for seeds may be sifted, but for growing plants, never do more than chop it finer or coarser, according to the size of the shift; for a large shift let the compost be used very rough. It is needless now to amplify on this subject, as I hope to be able to point out a few applications by and by.—*Gardener's Journal*.

LAKE SWELL.—Lake Michigan is, at the present time, probably higher than it has been at any time in a century. Much of the lake shore is flooded over the entire beach to the edge of the timber, and the border trees are rapidly washing out. On the high bluff shores, land slides are frequent and extensive. Low swampy grounds are overflowed from the Lake. We observed on Whisky Point a tamarack not less than one hundred years old, with eighteen inches water around it. It could never have grown with the water so high by a foot, and is of itself conclusive evidence of a most extraordinary stage of water.—*Exchange*.

* We have no true peat in this part of the Western country. The nearest approach to it, is the detritus of sandstone rocks, mixed with vegetable mold.

† We have here found this a valuable addition to the soil for potted roses.



The Vineyard.

OLD FRENCH METHOD OF ENRICHING POOR GRAPE MUSTS.

MY FRIEND:—You know how fond I am of rummaging over those good old volumes in your office; and if I do occasionally start more dust than is convenient, in your kindness you think I have the worst of it. In this age of *go-ahead-a-tiveness*, it is well to look back now and then upon those who have preceded us, and see what they have done and what they have left on record. With this spirit I like to wander into an old bookstore and look over what is there to be found.—In one of my visits to Messrs. Lyon & Paterson, No. 50 Sixth street, where much that is rare, instructive and beautiful may be met with by the curious, I have found a good old work, printed in the interval between the discovery of oxygen and the adoption of Lavoisier's nomenclature: "*Dictionnaire de Chimie, par M. Macquer: a Paris, 1778.*"

In the article "*Vin*," there are some statements that are new to me, and may be of interest to some of your readers who cultivate the vine. As I possess no practical acquaintance either with the vine or with wine, I hope you will use this translation just as, in the plenitude of your editorial wisdom, you may see proper.

M. Maupin has given much attention to the means of making wine, and has published his observations and experience on the

subject. He proposes means for improving wines, particularly for increasing the quality and diminishing the unripeness of those of too cold and wet seasons, in which the grapes do not come to maturity. As this object appears to be of great importance, I shall enter into detail.

The method of M. Maupin consists in reducing the *must* by evaporation, because it is commonly too watery when the grapes do not come to maturity. In order to procure a fermentation more prompt, vigorous and complete, he heats a part of the must in a kettle, and introduces this boiling must into the bottom of large tubs by means of a funnel with a long pipe; then covers the tubs, and by means of furnaces or stoves maintains a degree of heat such as experience has proved beneficial. Though this was not unknown to, and was even practiced by many intelligent wine-makers under similar circumstances; though they had deduced the same fact from the theory of fermentation, we must applaud the zeal of M. Maupin in his labor to effect the same object.

It is conceded that the quality of wine and its keeping property depend on the quantity of ardent spirit it may contain. Moreover the green musts are much less disposed to fermentation than the mature ones, which alone produce spirit and com-

bine with the other principles of the wine.—It is admitted that these means tend effectually to the production of the spirit and its combination with the other principles of the wine, and are very capable of correcting the bad qualities to a certain point. But are these expedients the best that can be employed under the circumstances? I can not believe so; and I dare assert that theory and experience unite to prove that there is a way, superior to remedy the aqueousness and unripeness of musts that are unsuited to produce good wines. To be convinced of this, it is only necessary to follow the operations of nature in the maturation of the grapes and in the fermentation which is excited in the juices of fruits.

Every one knows that the juice expressed from the grapes before they have commenced turning color, when in a state which is called verjuice, has but a sour taste without any sweetness; that it is notwithstanding susceptible of a well marked fermentative movement, but does not produce by this fermentation anything but a very acid fluid, which does not contain any (or if any, a very little) spirit—which can not change into vinegar—which can only tend to putridity—which, in a word, is not wine.

It is no less certain that the juice of the same grapes, when they have attained a full maturity, possess a mild flavor, very agreeable, extremely sweet, and in which we can distinguish scarcely any of the acidity which the grapes have before maturity. It is also true that the must of these ripe grapes is, of all known substances, the most disposed to a good and complete fermentation, of which the product is an excellent wine.

Hence it is easy to conclude, that in the maturation of grapes and other fruits, all the unknown operation of nature consists in producing in these substances a new condi-

tion—a new compound, which is a sweet material. This material envelops the acid so completely, or it becomes so predominant in it, especially in fruits the best adapted to make wine, such as grapes, that their sour taste is much diminished in their mature state. It is then they are in the most favorable condition to make the best wine; for it is very certain that it is the sweet principle which is the true material of the spirituous fermentation.

According to these principles, or rather after these constant facts, known and avowed by all chemists, is it not evident that when the grapes have not arrived at the proper maturity—when the acid predominates, all the means we are able to employ to make the best wine, in favoring and accelerating the fermentation, are unable to produce the desired result? or they produce it feebly and imperfectly; for the reason that none of these means can increase the proportion of the sweet principle over the acid one, and that really it is only the augmentation of this sweet principle which can effectually give rise to a good spirituous fermentation, and the production of a generous wine, exempt from tartness and insipidity, and the other defects which are more or less manifest in the wine made from immature grapes. It follows that the must of green grapes fails essentially by a too small quantity of sweet matter and a too great abundance of acid. The only truly efficacious means of remedying this defect, is to change in the must the proportion of these two principles. The plan is extremely simple; for it consists only in adding to the too acid must, the quantity of saccharine principle of which it is deficient. Experience proves that this addition produces the most advantageous results.

It might be feared perhaps that this addition of saccharine matter, being foreign

to the grape, would not be converted into wine, and would give it a different character from that of good wine from the grape. But I can assert that this fear is without foundation: first, because the saccharine matter is essentially the same, from whatever vegetable it may be derived,—that of the grape, even the most pure, not being really different from sugar; and secondly, because that which characterizes the wine of the grape is not its sweet portion, which is common to all the other fermentable liquors, but its extractive and acid parts, which constitute always the base of wines. Corrected and ameliorated in the manner I have proposed, they retain infallibly a character of grape wine which one can never mistake.

I can by no means doubt that many persons have tried this process with success, and perhaps have long ago made an excellent wine, and corrected by this means the defects of the unripe grapes. In this respect I do not present myself as the author of a discovery. But this is an object which it is good to make known; and not to speak but of what I am assured by my own observation, I will report two experiments I have made, which are the evidence of all I have advanced.

In October, 1776, I procured as many white grapes (*Pinot* and *Melior*), from a garden in Paris, as would make from twenty-five to thirty pints of wine. These were refuse grapes. I had chosen them expressly in so bad a state of maturity, that I could not hope to produce a drinkable wine. In nearly half of them the seed and the entire grape was so green that one could scarcely endure the tartness. Without any other precaution than to separate all that were rotten, I crushed the remainder with their stalks, and expressed the juice with the hands. The must was very muddy, of a

dirty green color, of a tart and sweet flavor, in which the acid so much predominated that it would cause grimaces in those who tasted it. I dissolved in this must enough brown sugar to give it the taste of good sweet wine, and without heating, without putting it into a cask, without a furnace, I put it into a tun, and placed it in a room at the bottom of a garden, where it was left to itself. The fermentation was established on the third day, and continued eight days, very decidedly, but very moderately: it subsided of itself after that time.

The wine which resulted, being new and yet troubled, had a vinous odor, lively and piquant. Its taste was a little harsh, manifesting that the sugar had disappeared entirely, as though it had never been present. I let it pass the winter in the tun; and having examined it in the month of March, I found that, without having been racked or clarified, it had become clear: its taste, though yet as lively and piquant, had become much more agreeable than immediately after the sensible fermentation, and was sweeter and more racy, and was nevertheless unmixed with any thing which approached to sugar. I then placed it in bottles; and examining it in 1777, I found that it had a fine clearness, was very brilliant, agreeable to the taste, generous and warm—in a word, like a good white wine of pure grapes, from a good vineyard, in a good season. Many connoisseurs, who tasted of it, gave the same judgment, and could not believe that it came from grapes so green, the must of which we had corrected with sugar.

This success, which surpassed my expectations, induced me to make a new experiment of the same kind, and more decisive by the extreme greenness and the bad quality of the grapes that I used.

November 6th, 1777, I collected from an

arbor in a garden in Paris, a variety of large grapes that never ripen well in this climate, and which we know only by the name of *verjus*, because it is rarely put to any other use than to express the juice before the grapes have turned, to be used in the kitchen for its acid flavor. Those which I operated on had scarcely begun to turn, though the season was far advanced, and they had been abandoned on the arbor without hope that they would acquire sufficient maturity to be edible. They were still so hard that it was necessary to heat them over the fire until they burst, before I was able to express the juice. They furnished eight or nine pints. This juice was of a very acid taste, in which a very slight degree of sweetness could barely be detected. I dissolved in it the most common sugar until it was well sweetened: it was necessary to use much more than for the wine of the preceding experiment, because the acidity of the latter must was much greater. After the solution of the sugar, the flavor of the liquor, though very sweet, had nothing of insipidity, because the sweetness and the tartness were so striking as to produce a disagreeable result.

I put this kind of must into a jar that it did not entirely fill, and covered it simply with a cloth; and the season being already very cold, I placed it in a room where the temperature was almost always kept at 54° to 56° F., by means of a stove. After four days the fermentation was not very evident; the liquor did not seem either so sweet or so acid, but the two tastes commenced to be combined, and the effect was much more agreeable upon the palate. November 14th, the fermentation was in full force; a lighted candle introduced into the jar was immediately extinguished. November 30th, the sensible fermentation had entirely ceased; the candle was no longer extinguished when

introduced into the jar. The wine which had resulted was very much troubled and milky; its flavor had scarcely anything of sugar; it was strong, piquant, and as agreeable as a generous and warm wine, but a little gaseous and tart. I corked the jar and put it in a cool place, that the insensible fermentation might continue through the winter.

Finally, March 17th, 1778, having examined the wine, I found it almost entirely clear. The remainder of the sweet taste had disappeared, and also its acid: the taste was that of a wine from perfect grapes, and as strong; it did not fail in flavor; it was without odor or bouquet, because the grapes that we call *verjus* have not the odorous principle. This wine, which is almost new, and which will improve by the insensible fermentation, promises to become generous, mild and agreeable.

These experiments appear to me to give evidence that the best way to remedy the defects in the maturity of grapes, is to follow that plan which nature indicates; that is to say, to introduce into their must the quantity of the sweet principle necessary, and which we are able to supply. This means is, of all others, the most practicable; for not only sugar, but also honey and molasses, and all other saccharine matters of a low price, can produce the same result, provided they have no other flavor that is disagreeable, or which can not be destroyed by a good fermentation.

I am well satisfied, not only from my own observation, but more from those of MM. Baumé, Roulle, and other chemists, who have made many experiments on spirituous fermentation, that by proper additions of the sweet principle, we could make excellent wines with the juice of common grapes—wines that should equal those derived from the very best grapes.

Those liqueurs which are made by mixing a convenient quantity of spirits of wine, with the juice of excellent well matured grapes, which is mild and sweet, containing the same principles in the same proportions, as the "liqueur of wine," which do not clarify themselves by fermentation, of which they are not susceptible, but by filtration and other expedients, producing liqueurs very pleasant, and which resemble to a certain point, the true liqueur of wines. They differ nevertheless, in a manner so obvious, that they can deceive but slightly a delicate taste; and this difference is caused from the fact, that the spirit of wine can never be combined in this mixture with the sweet and extractive principles, in the same manner that they are combined in the wines produced by fermentations; these last are true wines, the others are but ratafias, in which, in whatever manner they are treated, the spirit of wine always acts on the senses as alcohol. This adherence, this combination of the spirituous with the extractive, manifests itself in a way that is no less obvious in analysis. The spirit of wine being much more volatile than water and all the other elements of the wine, should be the first to be given off in distillation, by the first impression of the heat, if it were free and not adherent in the wine; whereas it is "phlegm," and not the spirit which ascends when we begin to distil the wine, especially at a moderate temperature. The spirit does not begin to pass over, until the wine has continued in the still, and undergone a more considerable degree of heat. This assuredly, is an evident proof that the spirituous part is combined with the less volatile elements of the wine, which retains it and will not allow it to escape until their reciprocal connection has been overcome by a sufficient heat. Hence, it is sufficient to heat wine to ebullition, in order to change its character entirely; when it has undergone this degree of heat, though it has continued but

for a moment, and the operation was performed in a close vessel, so that nothing spirituous could escape, it is no more wine; the spirituous part is no more united to the other elements. If we taste this wine after it is entirely cooled, we can distinguish the flavor of alcohol, and that of the extract of wine, each of which make their distinct and peculiar impression, in a manner unpleasant to the taste, which can not be observed in the same wine which has not been heated. . . .

In climates sufficiently warm to produce grapes of the sweetest variety, such as most of the Muscats, those which are called "Malvoisie" and others, come to a perfect maturity. The most of these excellent grapes naturally make a wine which retains the character of a liqueur; however, to give to these wines more strength and mildness, in many countries, they concentrate the juice to a certain point in the grapes themselves, by exposing them to the sun to produce a kind of baking to a point with which experience has made them acquainted, before expressing the must; in other cases they crush the grapes immediately after they are collected. But they concentrate and reduce their must on the fire, until it is a little syrupy, before allowing it to ferment, and the *liqueur wines* which are produced are named *vins cuits*. This operation does not change the nature of the must, because the degree of heat does not exceed that of boiling water, nor does it change the combinations of the principles; it removes nothing but the superabundance of the water of vegetation.

Though most of the *liqueur wines* most renowned, come from countries where the temperature is most favorable to the vegetation of the sweetest varieties of grapes, such as Greece, and the Isles of the Archipelago, the Canaries, Spain and Italy, and even Provence, and Languedoc, they can be raised however, in climates more northerly, and they

have been produced in Hungary and Tokay, which is nearly of the same latitude as Paris, the most esteemed and most rare. These wines like most others, bear the name of the country which furnishes them. It is the famous wine of Tokay, of which Frederick Hoffmann has proclaimed the medicinal virtues. This wine is truly drier and less sweet than those I am about to mention. It is correctly speaking, but a half liqueur wine, of which the taste is nearly the same as that of a mixture of Spanish wine, with good old still Champagne; it only appeared better and more agreeable to most of the great connoisseurs.

The wine of Tokay is made with a peculiar variety of grapes, which is without doubt the sweetest which can arrive at perfect maturity in Hungary. In the most favorable years, which are those with the finest autumns, they leave the grapes on the vines until the month of December; and when this season is rainy, they collect them and finish, according to Frederick Hoffmann, ripening them and drying them to a convenient point on ovens; these grapes, thus prepared, furnish a very sweet must, which by its fermentation produces the wine of Tokay.

It can not be doubted that it is very possible to make wine in all respects similar in other countries of the same climate as Hungary, where the inhabitants have industry and will bestow the required attention. I am assured that it has been done for a long time in upper Alsace, where they produce an excellent wine very similar to that of Tokay. I have tasted of this wine of Alsace made in imitation of that of Hungary, and I doubt not that the connoisseurs will find it as good as it has appeared to me. I have it from a citizen of this province, who has contributed much to its perfection, and who has had the kindness to communicate his particular observations. I will insert here the most important, the more willingly inasmuch as they

are essential to complete the history of vinous fermentation, which they confirm, and extend the theory of this operation as established by the best chemists, and I can not but conform to the intentions of the author, who, like an enlightened citizen, has a communicative spirit.

According to the memoir which has been sent to me by the kindness of M. Hoffmann, bailee of Bensfield à Strasbourg, with many bottles of wine, of his make, it is about fifty years since that a citizen of the Upper Alsace was advised, in the month of March, to make wine with the grapes that have been preserved until this time, in straw, for the use of the table. This wine, which resembled liqueur, was found so good and so agreeable, that many other inhabitants of the same province where he had made his experiment put it in practice, and made similar wine with more or less success according to the season and the attention they bestowed: but commonly it is found sufficiently good to hold its place with foreign wines. According to the custom of this province, it has the name of Vin de Paille, straw wine, and it is commonly presented on the tables at the end of the repast as a fine liqueur wine.

M. Hoffmann made it at first as the others, that is, in small quantities and only for his own use; but considering that this object might become important in the commerce of his province he has applied himself for twelve years to observe and investigate everything which could contribute to the perfection of this variety of wine and to improve it on a large scale; and not only that which I have tasted has appeared to me to have in a high degree all the qualities that could be desired in a wine of this variety, but those who know much better than myself have given the same opinion.

Independent of the qualities, such as the goodness and maturity of the grapes, which nature alone can give, three essential circum-

stances should unite on the part of art to obtain an excellent Vin de Paille.

The first is the choice and culture of the best species of grapes to make this wine.

The second is the manner to preserve the grapes, to give the highest degree of maturity, to augment the proportion of its sweet principle and to diminish the quantity of its water of vegetation.

The third is the best method to conduct and govern the fermentation of the must after it has been extracted from the grapes.

For the first condition, the Alsacians have commenced by selecting the variety of grapes of their province which appeared to them best adapted to their purpose, and they found that it was necessary to unite two kinds to imitate most perfectly the wine of Tokay; but M. H., to add one perfection more, procured plants from Hungary, which yielded very good results.

During the winter it is necessary to shelter these grapes from frost with great care; and when they are inclosed in a tight place, the humidity which evaporates abundantly, especially when they are in large quantities, and can not escape, causes them to grow moldy and putrify. M. Hoffman has remedied this inconvenience by means of a stove, by which he always obtains the temperature and dryness desirable. He has observed, that in order to perfect success, it is necessary that the grapes should have lost, before the must is drawn, almost three-fourths of their weight. When it is thought proper to tread them, they separate the stems, which, being very dry, would absorb a part of the juice; and even as this last is very thick, they add a twentieth part of common wine of the preceding year. After a very thorough treading, they leave the whole to rest twenty-four hours. They then carry it to the press. The must which is expressed is very sweet, as one may well imagine, and almost as thick as a syrup or liquid honey.

Nothing remains now but to produce a good fermentation of the must, which is the third circumstance necessary to the perfection of the *Vin de Paille*. The fermentation does not become manifest until from the eighth to the fifteenth day. The author has made on this subject an important observation. It is, that this fermentation is very slow, very long, and continues during eight or ten months. Afterward, he remarks, when it is very strong and continues for a shorter period, it is a bad sign—the wine is very inferior.

It is well to observe here, that the fermentation should be governed very differently, according to the nature of the must on which we operate. It appears even that the insensible fermentation which succeeds to the first in this wine, as in all others, and which tends to the perfection of the wine, is also in the latter of an extraordinary duration, and is prolonged for the length of five years and more. This, at least, is the result of M. Hoffmann's managing the wine, after the sensible fermentation, and the phenomena which it presents.

He does not rack the wine from the first lees until the end of a year. "It is not clear then," says M. Hoffman; "and I should be very sorry if it were, for it would be a deficient wine." He decanted it thus for four years without settling, or the wine perfecting itself. It commenced to clarify of itself at the end of the fourth year; at the fifth it was drinkable, and continued thus as long as wished, and improved in quality constantly. The author advises not to bottle sooner than the fifth year; and before doing so, to clarify with isinglass. I have, as I have said, of the *Vin de Paille*, made with attention to all these directions by M. Hoffmann. Without mentioning its very superior quality, it is impossible to produce a liquor more pleasant to the eye for its vivacity and brilliant transparency.

C. H. B.

Vineyard Calendar for August.

THERE is little to be done during this month, while the laborious vine-dresser may contemplate the rich harvest that is to reward him for his previous cares; or perchance he may be overwhelmed with chagrin at the loss of all his hopes, destroyed by blight.

Culture.—This must be confined to shallow dressing of the ground, with sharp hoes, merely to destroy intruding weeds. Be careful not to disturb the roots at this season, when the fruit is maturing and needs an uninterrupted flow of sap.

Training—Is to be attended to as it may be needed. The extending shoots may be secured to the adjoining stakes. Some advise to tie up the side fruit-bearing branches where the crop of fruit is so heavy as to drag them down. Do not prune off a leaf now: all are wanted to digest and prepare the sap for the ripening fruit.

Raising Grapes from Seed.

DR. WARDER:—My experience in raising grapes from seed does not meet the views of Mr. Riehl, of St. Louis, in all respects. I agree with him, that seedlings from the Catawba grape show a disposition to go back to the parent Fox. I never plant in pots, but in rows in the open ground. Here the plants come up freely in the spring; and among more than five thousand plants, I have never seen one that did not, from the leaf and stem, appear perfect in male and female organs, and certain to bear fruit. Every season vines come up in my garden, which bear no resemblance to any I cultivate; and these seed, I have no doubt, are dropped by birds. They grow with great vigor, and always give evidence that they will bear no fruit. Planted in the open ground and tended with care, seedlings will bear fruit the third or fourth year.

I concur with Mr. Riehl, that strong grow-

ing wood is an objection. It is seldom solid, and it is subject to be killed during the winter. I now have several thousand seedlings. A part I keep in the seed rows: the greater part I set out in my vineyards, near together, with a view of cutting out all of inferior quality when in fruit.

As I have before stated, I have a desire to renew my life lease, to cultivate seedlings extensively from our best grapes, as I believe we can in a few years equal even the best European table grapes. I shall, the first opportunity, apply to the Rochester Knockers to learn the secret, if it does not cost me over a hundred dollars—the same I paid to Miss Loomis (fifty dollars each time) for twice reading a sentence inclosed in tinfoil. I hope it will not close, as it did then, in my being an unbeliever. It induced me to offer her one hundred dollars, to read a new envelop. She tried; but as I kept a constant eye on the paper, she failed, but promised to meet my wishes when she next visited our city. I parted with the hundred dollars with pleasure, though satisfied of the deception.

I find no attention paid to the sexual character of the strawberry here, by those who raise them for market. They informed me that they had never noticed any difference in the appearance of the blossoms. On visiting their grounds, I found a hermaphrodite—a good bearer for one of that class, and a greater quantity of them than of pistillates. They also cultivate extensively a pistillate seedling, of the hermaphrodite Large Early Scarlet. This to my mind accounts for the prolific character of the Large Early Scarlet, as given in eastern publications. For certain it is, the old Large Early Scarlet will not average one-third of a crop of perfect fruit. This fruit, if as early as the parent, will be valuable for cultivation in Kentucky, for our market. I shall bring

some plants of this strawberry, and of their seedling hermaphrodite, which is from the Iowa. It is a great bearer, notwithstanding one-third of the blossoms are barren, from a defect in the female organs. This, however, is fortunate, as the fruit is so profuse in the production of blossoms, that the plant could not perfect the fruit if all the blossoms were perfect. The berry is the shape and color of the Iowa, though less bright, and rather soft to carry without bruising. Where people will not believe our backwoods doctrines it is a valuable variety. But I shall be disappointed if Mr. Huntsman and Mr. Prince, able botanists and accurate observers, do not compel them to become believers. It will be more for the interest of the buyers than the gardeners, as it will reduce the price.

One gardener was very severe on Burr's New Pine. He assured me that he paid a high price for plants, and had put out a large quantity, but not one blossom in fifty had even a defective berry, and he believed he had been cheated. I went with him, and found several long rows, of vigorous growth. I inquired—"What other kinds have you with them?" "Oh," said he, "none others." His hermaphrodite rows were some forty feet apart, with shrubbery between them. I told him that he had no reason to complain; that I was satisfied to see even a defective berry; that I believed them to be the true Burr; and if he would transplant a few of his Iowa seedlings among them, I would next season insure him a full crop of finer flavored fruit than any on his grounds.

L.

Valk's Seedling Grape.

DR. WARDER:—In the Horticulturist of the present month, there is a letter purporting to be from a vine grower of the name of Dr. Valk. It must be a spurious letter.—Certain it is, no vine grower, who makes his

grapes into wine, and drinks the pure juice, could have written it. I can not believe it was ever written by a medical brother of yours, even if he deals in nothing but salts and sulphur. The fictitious writer claims to have raised a seedling grape, of hardy character, from a cross between the Black Hamburg and Isabella, "superior to every other grape grown in the open air in any part of the United States, and as I venture to say, without a rival." He expects, the coming fall, to have it tested at Boston, with the Diana, and some other grapes "that he has read of."

From this, I should infer, this writer under a fictitious name, lived in fox grape region, and had only seen grapes of that family, and the Isabella, in cultivation in the open ground. This writer, so far from seeing, it seems has not even heard of our best native grapes for the table. Our Union Village grape will exceed his in the size of the berry, and of the bunch; and equals the Black Hamburg in thinness of skin, softness of pulp, and abundance of juice; its flavor is not equal. Our Herbemont, Lenoir, Ohio, and Missouri, equal the Meunier (Miller's Burgundy) which is much praised in European publications.

But you will ask, why I conclude that the letter was not written by the grower of a seedling grape. He says to Mr. Downing,—*"Your notice, as far as it went, was flattering, and soon brought me numerous applications for vines and cuttings, but I have so far destroyed all cuttings, and resisted very many exquisite hints about giving or selling a single eye."* Your brother M. D., if a real person, would have been operated on by different feelings. His course, if true, in the grape, would have been as nauseous to our stomachs as it would be to have him force down our throats calomel by the pound, when we are in the enjoyment of perfect health. I trust that Jeffries will give us his views in the next number of the Horticulturist, and expose the writer who, without authority, has used the name of Dr. Valk, if there be such a horticulturist.

One good may result, it may induce persons to raise seedlings, from a cross between our best native and foreign grapes. We should not select the Isabella as the best for this purpose; and are experimenting by raising from the seed of our best native grapes.

A BACKWOODS VINE-DRESSER.



TRANSACTIONS.

The Cincinnati Horticultural Society.

This interesting society has continued to keep up its meetings with a good deal of spirit, notwithstanding the sultry hot weather which has ripened the fruits that had escaped the biting frosts of spring.

The discussions at different meetings have been spirited, and characterized by that usefulness which has so constantly prevailed during the recent deliberations of the body.

The tables have been tastefully decorated with handsome vegetables, rich fruits, and lovely flowers.—Among the latter, all were struck with the beautiful Hoya bella from S. S. Jackson, and every one admired the stands of Dahlias and Hollyhocks, from Messrs. Heaver, McAvoy, Cox, and others.

American Wine Growers' Association.

The meeting of the Wine Association was held on Saturday, June 26th, 1852, at the beautiful country seat of the President of the Association, Dr. L. Rehfuss, where the members assembled about three o'clock, and previous to the organization of the meeting, examined the flourishing vineyards on the north and south sides of the road, which gave evidence of skill and good management, in the successful culture of the grape, and the fine quality of his wines. Everything about the vineyards, in cultivation, drainage, and pruning, gave entire satisfaction to the members.

The meeting being organized, Dr. Rehfuss in the chair, and Geo. Graham acting as Secretary, on motion of Dr. Mosher, Mr. Dinsmoor, of Kentucky, who was present, was unanimously elected a member.

The members then proceeded to test the quality of wines sent to the meeting from a number of neighboring vineyards, which are noted below, with remarks and decisions by the members:

Bottle No. 1, vintage of 1845, Catawba, made by L. Rehfuss, pronounced fine flavor, GOOD OLD WINE.

No. 2, vintage of 1846, Catawba, a good wine, but a little injured by the cask.

No. 3, vintage of 1847, Catawba, made by Dr. Mosher, high flavor, and very superior wine.

No. 4, vintage of 1847, Catawba, L. Rehfuss, a wine of excellent quality.

No. 5, vintage of 1848, Catawba, high flavor, very fine, made by Dr. Mosher.

No. 6, vintage of 1849, Catawba, made by Dr. Mosher, a very good wine.

No. 7, vintage of 1849, Catawba, made by Mr. Bogen, very superior. Grapes raised on a sandy soil.

No. 8, vintage of 1850, Catawba, good fair wine, made by Mr. Bogen.

No. 9, vintage of 1850, Catawba, high colored, excellent, made by Mr. Bogen.

No. 10, vintage of 1850, Catawba, by L. Rehfuss, very pleasant, light, and mild.

No. 11, vintage of 1851, made by Mr. Werk, highly colored, and a fine quality of Catawba.

No. 12, vintage of 1851, made by Mr. Werk, light color, very strong and well flavored. The vines manured with potash, an improvement in the grapes.

No. 13, vintage of 1851, same as No. 12.

No. 14, vintage of 1851, made by Mr. Werk, not clear, inferior, grapes raised on a grass sod, without much cultivation.

No. 15, vintage of 1851, Catawba, made by Mr. Chas. Young, very fine aroma, excellent wine.

No. 16, vintage of 1851, Catawba, made by Mr. Miller, highly colored, very good.

No. 17, vintage of 1850, Catawba, made by Mr. Miller, a very fine wine.

No. 18, vintage of 1851, Catawba, made by Mr. Bogen, a superior quality of wine.

No. 19, vintage of 1851, Catawba, made by L. Rehfuss—vines manured with potash—fine flavor and fine wine.

No. 20, vintage of 1851, Catawba, made by L. Rehfuss, a very good wine.

No. 21, imported Rhenish wine, (Deidesheimer,) 1842, similar to the Catawba, of the vintage of 1845, but no better than No. 19, Catawba of 1851.

No. 22, vintage of 1851, Cape Grape, made by Mr. Werk, fermented on the skin, a superior wine, resembling good claret.

No. 23, vintage of 1851, Cape, made by Mr. Miller, resembles fine claret.

No. 24, vintage of 1851, Missouri Grape, made by Mr. Miller, highly colored, superior to Claret.

No. 25, vintage of 1851, Missouri, made by Mr. Rehfuss, from Mr. Young's grapes, a very fine wine.

No. 26, vintage of 1848, Isabella, an excellent wine, highly colored.

No. 27, vintage of 1848, Missouri grape—good imitation of fine Port wine.

No. 28, vintage of 1850, Champagne, made by Mr. Bogen, superior.

No. 29, imported Champagne, inferior to Bogen's.

No. 30, old Champagne, imported from France, not as good as Bogen's.

No. 31, Champagne made by Bogen, pronounced better than the imported Heidsieck Champagne.

After the examination of the wines, and after partaking of the choice collection of fruits, and several varieties of foreign cheese, which were intended to correct the taste, the following members took part in a discussion on the value of manure for grapes, viz: Dr. Mosher, Dr. Rehfuss, Anthony, Peticolas, Kelly, Werk, Young, Orange, Dinsmoor, and Graham, who unanimously agreed that vines manured with potassium, or common ashes, would improve the flavor of the wine, and insure a better quality than the natural soil.

The President presented a copy of Mr. Buchanan's work on the Vine, to the Association. When it was Resolved, That the work be recommended as one of the best for the instruction of the vine-dresser, in growing the grape in this climate.

Several gentlemen from Germany, being at the

house, on a visit to Mr. Rehfuß, they were invited to unite with the members in testing the wines, and expressed their astonishment and gratification, in witnessing the great progress now making in this valley, in the production of superior native wine.

Adjourned to meet next month.

G. GRAHAM, Secretary *pro tem*.

Albany and Rensselaer Horticultural Society.

The first exhibition for 1852, took place at the New York State Agricultural Society rooms, on Tuesday the 22d of June; the floral display, both in beauty and variety, eclipsed that of any former exhibition; and taking into consideration the unusual drought, the display of fruits and vegetables exceeded all anticipations.

The Society met at 12 m., Dr. Herman Wendell, its President, being in the chair, when eight gentlemen were chosen delegates to the American Pomological Congress, which is to convene in Philadelphia, on the 13th of September next; also committees to represent it at the Autumnal Exhibition of the Massachusetts Horticultural Society, and at the Autumnal Exhibition of the Pennsylvania Horticultural Society.

FRUITS.

The committee reported that there was exhibited by Joel Rathbone, of Kenwood, seven varieties of Strawberries, viz: Boston Pine, Ohio Mammoth, Iowa, Burr's New Pine, Keen's Seedling, Crimson Cone, and Black Hautboy.

By James Wilson: four varieties of Strawberries, viz: McAvoy's No. 1, (a famous bearer,) Lizzie Randolph, Schneicke's Pistillate, and one unnamed. Mr. Wilson exhibited his fruit with its foliage and on the stalk, with both ripe and unripe fruit, showing its character as to productiveness. Also, Cherries, Currants, and very large unripe Gooseberries.

By B. B. Kirtland, of Cantonment Farm: ten varieties of Strawberries, viz: Hovey's Seedling, Burr's New Pine, Scioto, Ohio Mammoth, Crimson Cone, Columbus, Burr's Old Seedling, Boston Pine, Ross' Phoenix, and two Seedlings of fine appearance, large size, and very good flavor; also two varieties of Cherries, viz: Maydukes, and a Seedling raised by Mr. K., of medium size, beautiful appearance, and good flavor; the tree is said to be quite thrifty and a great bearer.

By C. P. Williams: six varieties of Strawberries, viz: Hovey's Seedling, Burr's New Pine, Black Prince, Virginia Scarlet, Ohio Mammoth, and an Accidental Seedling of large size, pale pink color, and good flavor; also very large clusters of Catawba and Isabella Grapes. In order to show the character of Hovey's Seedling as a bearer, Mr. Williams exhibited a number of single stems, and several whole plants, laden with the ripe and unripe fruit, proving, to the satisfaction of all, that it is—when well cultivated—an enormous bearer, as well as the most beautiful berry on exhibition. The committee wish to thank Mr. Williams for this display, and beg leave to suggest to members, that a like exhibition of all the varieties grown by them, be made next year, in order that fair comparison may be made between the varieties, in all their qualities.

By J. S. Goold: sixteen varieties of Strawberries, viz: Bickton Pine, a beautiful white berry, of large size, its first exhibition in Albany, Princess Alice Maud, Columbus, Crimson Cone, Boston Pine, Black Prince, Burr's New Pine, Jenney's Seedling, Hovey's Seedling, Virginia Scarlet, Bishop's Orange, White Alpine, Iowa, Black Hautboy, Ohio Mammoth, and Ross' Phoenix, Mr. Goold deserves great credit for this large display of well grown and beautiful fruit.

PREMIUMS.

For the best and most extensive collection, to John S. Goold, for 17 varieties.

For 2d best and 2d most extensive collection, to B. B. Kirtland, for 10 varieties.

For best and finest flavored variety, to Joel Rathbone, for Burr's New Pine, beautiful specimens.

For 2d best and 2d finest variety, to C. P. Williams, for Hovey's Seedling, very large and beautiful specimens.

The committee in awarding this premium, wish to remark, that notwithstanding they think the flavor of Burr's New Pine more delicate and delicious than that of any other variety exhibited, still it is not by them considered as beautiful, as hardy or as prolific, as the Hovey Seedling, and consequently not so desirable a variety for cultivation on a large scale.

HERMAN WENDELL,
B. B. KIRTLAND,
ELISHA DORR.

GREEN-HOUSE PLANTS AND FLOWERS.

The committee rendered the following awards:—

For best six plants in pots, to E. Corning, Jr., (Morris Walsh, gardener,) for Euphorbia Splendens, Gloxinia Candida, Maxima and Speciosa, Adamia Versicolor, and Clerodendron.

To Col. Rathbone, (W. Gray, gardener,) L. Menand, and Wm. Janes, a discretionary premium each, for their splendid display of green-house plants and flowers.

Pelargoniums—For the six best plants in pots, the premium is awarded to Col. Rathbone, for Anais, Hebe's Lip, Bridesmaid, Clouded Perfection, Washington, and Queen of Siam.

For the three best plants in pots, the premium is awarded to L. Menand, for Anais, Elegans, and Sidonia.

To V. P. Douw, for his splendid display of Pelargoniums, a discretionary premium is awarded.

WM. NEWCOMB,
WM. JANES,
J. S. GOOLD.

FLOWERS, BOUQUETS, ETC.

The committee report what were exhibited, and the following

PREMIUMS.

Roses—Including all hardy varieties; for the best exhibition, the premium was awarded to James Wilson.

For the best 12 varieties, the premium was awarded to James Wilson, for Mrs. Elliott, Village Maid, Schonbrun, Juliette, Faveriens, Aspasia, Queen, Cristata Moss, Princess Lamballe, George 4th, Miralba, and Persian Yellow.

For the best 6 varieties, to V. P. Douw, for Lady Stuart, La Tourterelle, Striped Unique, Cassimer Perrier, Persian Yellow, and Episcopal.

For the best display of annual and perennial flowers, to Wm. Newcomb.

For the three best distinct varieties of Pinks, to E. Corning, Jr.

The best Peonies were from James Wilson, but there not being a sufficient number of varieties, the committee could award no premium.

For the best large round bouquet for center table vase, the premium was awarded to James Wilson.

For the best large flat bouquet for mantel vase, to Mrs. Van Namee.

For the best basket bouquet, with handle, to Mrs. Newcomb, of Pittstown.

For the best hand bouquet, flat, to James Wilson.

For the best hand bouquet, round, to James Wilson.

WM. A. WHARTON,
ERASTUS CORNING, JR.,
JEFFERSON MAYELL.

PREMIUMS ON VEGETABLES.

Cauliflowers—Best two heads, to V. P. Douw.
 Cucumbers—Best brace grown under glass, to V. P. Douw.
 Lettuce—Best six heads, to J. B. Hutson.
 Peas—Best half peck, to Jefferson Mayell.
 Rhubarb—Best six stalks, without leaves, to James Wilson.
 E. E. PLATT,
 E. DORR.

The second exhibition for 1852, took place at the Hall of the Agricultural Society, on Tuesday the 6th of July. The display of Fruit was unexpectedly large and varied, as was also the show of Plants and Flowers, as well as Vegetables.

PREMIUMS AWARDED.

Cherries—For the best and most extensive collection, to B. B. Kirtland. For the 2d best and 2d most extensive collection, to Jefferson Mayell. For the best three varieties, to E. E. Platt, for Graffion or Yellow Spanish, Black Tartarian, and May Duke. For the best one variety, to B. B. Kirtland, for Elton.

Currants—For the best and most extensive collection, to James Wilson. For the best and finest flavored variety to Col. Rathbone, for Knight's Sweet Red. For the 2d best and 2d finest flavored variety, to Jefferson Mayell, for very fine specimens of White Dutch.

Gooseberries—For the best and most extensive collection, to Joel Rathbone Esq. For the 2d best and 2d most extensive collection, to V. P. Douw. As the gooseberries were unripe, the premiums for best flavored and best variety, could not be awarded.

Raspberries—For the best and most extensive collection, to Col. Rathbone, for five varieties. For the best and finest flavored variety, to Jefferson Mayell, for Franconias. For the 2d best and 2d finest flavored variety, to V. P. Douw, for Red Antwerps.

HERMAN WENDELL,
 C. P. WILLIAMS.

PREMIUMS ON GREEN-HOUSE PLANTS AND FLOWERS.

For the best six plants in pots, to E. Corning, Jr., (Mr. Walsh, gardener,) for Euphorbia Splendens, Opuntia Braziliensis, Clerodendron, Fallet, Gloxinia Maxima, Russelia Junea, and Thabornantia Coronaria.

For the best six Fuchsias, to V. P. Douw, (Mr. Byrnes, gardener,) for Napoleon, Delicata, Hero, Globosa, Beauty Supreme, and Corallina,—these plants were beautifully grown.

For the best three varieties of Fuchsias, to L. Menand, for Voltigeur, Corallina, and Delicata.

To Col. Rathbone, (W. Gray, gardener,) and to James Wilson, each a discretionary premium, for their splendid display of well grown plants.

W. NEWCOMB.
 W. BUTTERCASE.

PREMIUMS ON BOUQUETS, FLOWERS, ETC.

For best exhibition of Dahlias, to Col. Rathbone.
 For best six varieties of Picotees, to Wm. Newcomb.
 For best three varieties of Picotees, to Col. Rathbone.
 For best display of annual and perennial flowers, to Wm. Newcomb.

For best large round bouquet for center table vase, to Mrs. Van Namee, of Pittstown.

For best large flat bouquet for mantel vase, to Mrs. W. Newcomb, of Pittstown.

For best basket bouquet with handle, to Mrs. W. Newcomb, of Pittstown.

For best hand bouquet, flat, to Mrs. Newcomb, of Pittstown.

JEFFERSON MAYELL,
 B. B. KIRTLAND.

PREMIUMS ON VEGETABLES.

For best turnip beet, to J. B. Hutson, for Bassano variety.

For best half peck of string beans, to V. P. Douw.
 For best brace of cucumbers, open culture, to E. Wood, Newtonville.

For best onions, to J. B. Hutson.

For best carrots, to Col. Rathbone.

For best brace of early squashes, to Jefferson Mayell, for Mountain June variety.

E. E. P. ATT,
 E. DORR.

E. P. JOHNSON, Sec'y. of Society.

Genesee Valley Horticultural Society,

AT ROCHESTER, NEW YORK.

THE Midsummer Exhibition of this Society took place in Corinthian Hall, on the 26th of June. A most lovely day added to the pleasures of the occasion, and flowers, roses and strawberries were never more beautiful.

Strawberries.—Some fifty varieties were shown, viz: Burr's New Pine, Jenney's Seedling, Hovey's Seedling, Swainstone Seedling, Genesee Seedling, Large Early Scarlet, Black Prince, Crimson Cone, Richardson's Early, Richardson's Late, Monroe Scarlet, Climax Scarlet, Royal Scarlet, Prince's Profuse Scarlet, do. Lizzie Randolph, do. Charlotte, do. Primordeau, do. Cornucopia, do. Estelle, do. Primate, Willey, Boston Pine, Prince of Orleans, French Hautboy, Longworth's Prolific, McAvoy's Extra Red, do. Superior, Moyamensing Pine, Stoddard's Seedling, Walker's Seedling, Seedling from Burr's New Pine, Princess Alice Maud, Lord Spencer, British Queen, White Alpine, Wild Strawberry, Roseberry, Miller's, Rival Hudson, Buist Prize Seedling, Mound Scarlet, Unique, Ellwanger & Barry's Seedlings, Iowa, Scarlet Melting, Seedling of Bissell & Hooker, very fine.

After a careful examination, the committee agreed in proposing the following premiums:

Amateurs.—For the best quart of strawberries (placing flavor and productiveness before size) to G. L. Southworth, for Burr's New Pine; 2d, M. G. Warner, for Burr's New Pine. For the greatest number of varieties and best grown, to R. G. Pardee.

Nursery-men.—For the best quart, Bissell & Hooker; 2d, Hooker & Co. For the greatest number of varieties and best grown, Ellwanger & Barry.

As the results of their examination, the committee have been led to regard with much favor the following varieties: Burr's New Pine, best and most valuable for home cultivation; Large Early Scarlet, early, productive, and the most valuable fertilizer; Scarlet Melting, exceedingly productive and easily raised, flavor moderate, and too soft except for home use; Rival Hudson, for a late sort, and for market and preserving; Hovey's Seedling, and Crimson Cone.

J. J. THOMAS, Chairman.

Exhibitors.—R. G. Pardee 40 varieties, Ellwanger & Barry 15 do., Hooker & Co. 10 do., M. G. Warner 6 do., Bissell & Hooker, 10 do., G. D. Southworth 2 do., Sheppard & Cheny 12 do., Frost & Co. 1 do., M. Long 2 do., Mrs. Jewell 6 do.

Roses.—All the best varieties grown in our country were shown, embracing as many as one hundred and fifty varieties, including the following:

Hybrid Perpetuals—Auberon, Augustine Mouchelet, Crimson, Clementine Duval, Duchesse de Sutherland, Dr. Marx, Edouard Jesse, Felicite Parmentier, Geant des Battailles, Lady Alice Peel, Louis Bonaparte, Lane, Leopold, Maiden's Blush, Mrs. Elliott, Melanie Cornu, Madame Damene, Madame Laffay, Madame Prevost, Prince Albert, William Jesse.

Damask Perpetuals—Louise Puget, Rose Devigne.

Hybrid Damask—Madame Hardy, Beaute des Janssens.

Gallica—Allemande, Assemblage des Beutes, Cor-

nue, Beante Parfaite, Boule d'Anteni, Blanche Fleur, Dessain, Duc de Bassano, Grandissima, Marmorante, D'Auvergne, Phedre, Great Western, Village Maid, Kean, Triomphe d'Abriate.

Provence—Duchesse, Spotted Sylvain.

Hybrid Bourbon—Charles Duval, Belle St. Cyr, Lady Montgomery.

Hybrid China—Compte de Lacedepe, Ne Plus Ultra, Madame Plantier, Chenedole, Princess Lamballe, La Fontaine, George IV, Fleur Blanche, Unique, Victor Hugo, Languinea, Louis Philippe.

Briers—Harrisonii, Austrian Brier, Double Margin. Noisette—Lellenberg, Solfaterre.

Climbing—Russell's Cottage, Queen of the Prairies, Dundee Rambler, Baltimore Belle.

Semperflorens—Pallida, Gold Striped, Boursault.

Bourbon—Malmaison, Leveson Gower, Union le Grenadier, Julie de Fontenelle, Madame Lacharme, Hermosa, Cythere.

Moss—Unique de Provence, Carmoisine de Luxembourg, Princesse Adelaide, Old Moss, Marbled Moss.

Exhibitors.—John J. Thomas, Ellwanger & Barry, Samuel Mouleon, A. Frost & Co., William Webster, William King, C. J. Ryan & Co., nursery-men; William Bull, J. A. Eastman, amateurs.

Floral ornaments and hand bouquets were numerous and beautifully arranged. Exhibitors—Mesdames Selden, Donnelly, Bissell and Pamene.

The nursery-men displayed all the varieties of Verbenas, and the botanists had fine collections of wild flowers. The collections of roses were very fine, while S. Mouleon had the credit of as fine a collection as any offered. Altogether it was a triumph of Flora; while Pomona and her train acknowledged that to Ohio is due the palm of having originated the best flavored and sweetest strawberry (Burr's New Pine) ever yet seen.

J. H. WARRS.

P. S. Strawberries, and today (July 1st) Harvest Apples from Cincinnati, were brought here. So much for railroads.

J. H. W.

Rome Horticultural Association.

The first exhibition for the year, was held at American Hall, on Thursday, June 24th, where, notwithstanding the rain, a goodly number of persons were in attendance.

The show of flowers was fine, especially in the beauty and variety of the specimens exhibited. Of fruits, the strawberries were the greatest attraction, and were finer than we have seen them in Rome.

N. Y. Farmer.

The same paper gives the reports of the committees in full detail. Hovey's Seedling, Large Early Scarlet, Burr's New Pine, and Hudson, appear to have been most highly prized.

New York Horticultural Society.

This association flashes forth upon us like a meteor of light, in the glowing accounts that appear in the *American Gardener's Chronicle*, a new periodical that makes its first visit to the Editor. To whom is he indebted for the two numbers that have been directed personally, not officially, and pre-paid? Can the New York Society, flushed with its recent triumphs, that are named by every paper, as excelling all other exhibitions in the country, can it have thought of sending an account of its doings, or has some kind friend done me the favor?

To whomsoever, let the acknowledgment however be made, and the work and its works shall be named again. The New York Society meets four times a month, the Washington Hights Society twice a month, and the American Gardener's Chronicle meets its readers once a month.

Agricultural Wealth.

MR. BELL, of Ohio, in a speech in Congress, presented an estimate of the agricultural wealth of this country, based on the census returns, in which he computes the amount at 1,281 millions of dollars.

THE SLUG—Has again made its appearance on the Peach and Cherry trees. Cultivators of such trees should attend to them in time and every morning scatter dry wood ashes over the foliage. If ashes is not convenient, earth will answer the purpose.

PEACHES.—A gentleman extensively engaged in fruit raising near Alton, tells us there will be no peaches from that vicinity this season. He says the most promising orchard will not yield 200 bushels, and less perhaps than has been known in five seasons past will be brought to this city. The crop is almost an entire failure.—*St Louis News*.

THE PROPERTIES OF THE CALCEOLARIA.

1. The plant should be shrubby; the habit bushy; the wood strong; the foliage thick and dark green.

2. The flower stem should be short and strong; and the footstalks of the blooms elastic, and branching well away from each other, to form a rich mass of flowers, without crowding.

3. The individual flower depends entirely on the form of the purse; it should be a perfect round hollow ball; the orifice and calyx can not be too small, nor the flower too large.

4. The color should be very dense; whether the marking be a spot in the middle, or stripes, or blotches, it should be well defined; the ground should be all one color, whether white, straw, sulphur, yellow, or any other color.

5. The color of a cell should be brilliant, and all over of the same actual shade; dark flower with pale edges, or clouded and indefinite colors, are bad and unfit for show.

6. The bloom should form one handsome group of pendent flowers, commencing where the foliage leaves off; the flower stems should not be seen between the foliage and the flowers, which latter should hang gracefully, and be close to each other; the branches of the flower stems holding them so as to form a handsome surface.—*Glenny's Properties of Flowers*.

Editorial.

OUR FRONTISPIECE—THE HOMESTEAD.

THE natural materials of nearly universal provision in the States are timber and stone. The climate, though varied in different portions of the country, demands, however, nearly the same protection against its contingencies. The dreary snows of the North require the same form of roof, for instance, as the deluging rains and furious winds of the South, and it is a truism, that "what will keep out the cold will exclude the heat." Stone and wood can be made equally subservient to the same principles of construction, although widely differing in character.

The first constructive want demands a steep, high pointed roof. That is easily given, but it will affect the rest of the building. How? It will require the general lines not to contradict the upward-pointing tendency of this prominent feature of the edifice. So then we have a first element of design to work upon—upward direction of its main lines. But this, if universally carried out, would involve a form not suited to every situation, or congenial with every style of scenery. Therefore the design must in character present such a harmonious combination of the vertical line to accord with the soaring tendency, and the horizontal line, to accord with the ordinary features of every-day landscapes. But this can only be done, without danger of violating one of the first laws of symmetry, by making the vertical character the main feature of the house, and the other subordinate; arriving, in fact, at the pyramidal form, or an outline based upon its principle. . . .

Next to the tower, the most prominent feature that would be likely to challenge remark is the large porch-like projection on the south. This is the ombra; and it will

at once be seen to be a very desirable and most comfortable addition to the house. A geometrical elevation of the eastern or entrance side of the house is given, drawn to a scale of one-twentieth of an inch to the foot.

The entrance-way is through an arched opening into a vestibule; arched because the construction required it, and the material, which is assumed to be stone, permitted greater strength to be gained, and with superior economy and character by such a form, than by a square-headed opening with its lintel and posts.

The rough edges of the stone are cut-off at an angle,—chamfered, as such a process is technically called, and the radiating joints of the masonry round the pointed arch are protected from injury of water lodging therein, by a hood molding a few inches above them, cut off abruptly on the under side, so as to at once throw off the water, and sloped to an easy curve on the upper side, so as to lead the wet along, and discharge it perpendicularly at the "drip," or termination of the molding. Buttresses are shown to the angles of this projecting block of building. These are necessary, because so much of the stone-work has been cut away, to allow the opening to the door on one side, and the window on the other, that the superincumbent weight would be too much for the piers thus left, unless they were aided and strengthened by buttresses, or such other support. The bay window that projects on this side, is a feature too commonly met with to demand remark. I would only call attention to the connection given therewith and the building, and the preservation of the unity of principle decided on from the first, by the arrangement of the windows above

it, by which the pyramidal form is carried out, and the parallelism and horizontal tendency of the lines of the upper part of the window, blended into a return to the vertical expression. The same remark will also apply to the combination of the windows in the other gable facing south. The central portion recessed, where is the ombra, has, you will observe, a uniform and intentional parallelism and strict adherence to horizontal lines. This, if the building were cut off here, would cause an unsightly want of symmetry in the whole mass; but the tower on one side, the connection of the ombra therewith, and the marked character of the pointed gable that flanks it on the other side, make it a subordinate to the whole mass, a necessary background to these prominent features, and a point of contrast that permits the boldness of the rest to become more apparent.—*Rural Homes*.

Dayton — W. Jamison's Garden.

THE sweeping train upon the Dayton Railroad soon carries the passenger, who escapes from dust and noise to the retreats of the country, through the most beautiful and fertile valley; not all flat cornfields, but embracing the most lovely undulations, upon which are springing up suburban villages, as at Glendale, amid the shady groves and overlooking the most agreeable foreground.

The cultivation of grapes has attracted some attention in the neighborhood of Miamisburg, upon the gravelly hills based on the same rock formation as that about Cincinnati. The success of the enterprise was not ascertained; but the appearance of the vines, as the train passed rapidly by, was that of wealth.

The sun shone brightly at Dayton next morning, and invited to a ramble along its wide and pleasant streets, ornamented as

they are by neat and tasteful residences, gardens, and a very fine park well planted with healthy trees of various kinds, which will always guaranty to the city the admiration of all tasteful beholders.

After breakfast, with the aid of a horse and carriage, I was soon upon the grounds of our old friend Jamison, to the east of the city; whence spread the broad plain, covered with houses, and all squared off with rectangular streets and roads, the latter extending for miles to the westward toward the great and growing and glowing State of Indiana, famous for its fertile farms. But these suggestive objects could not enchain my attention while receiving the kind and hospitable attentions of mine hostess, who was introducing me to all the garden beauties at our feet; of which, indeed, she, quite as much as her husband, is the protector and nurse.

I must hasten to notice a few of the attractions. The roses—among which the Chromatella was preëminent and in handsome bloom, beside the Augusta, only in bud, but showing a very close relationship—Remontants and Bourbons, doing very well. Madame, however, is remarkably successful in raising seedlings, of which she has her numerous progeny of every variety she can procure; and hence she has a rich garden show of annuals in fine bloom. Among these, and the hardy herbaceous plants that attracted my attention, were some new Xeranthemums, Delphiniums, Podolepsis chrysantha, Silenes, Veronicas, Bartonias aurea, Lonicera inodora, Gaillardias, Malope, Residas, and especially the most beautiful display of stock Gillyflowers I have ever beheld, and in such variety and profusion as to fill the whole air with delicious fragrance.

The excesses of our youth are drafts upon our old age, payable with interest.

Changes.

OUR old friend, Col. Benjamin Hodge, of the Buffalo Nursery, has sold out his plant interest in that old and extensive concern, which is said to be the oldest west of the Hudson, as the proprietor has been engaged in the business for thirty-three years. The Buffalo Commercial says—

“We are sorry to see our old friend Mr. Hodge retire from the business, for he has been long known as a leading and skillful man in the tree and plant culture; and in every society and association within his circuit, having for its object the diffusion of Horticulture and its kindred objects, he has been an esteemed and prominent member. No man has sustained a higher reputation for integrity in his profession. We have no doubt his energy will take another direction, and though he retires from the business which has so long engrossed his attention, his voice will still be heard by his brother nursery-men, through their journals and in their societies. It is already well known to many of our citizens that Col. H. has a fine farm of some two hundred acres, at the foot of Grand Island, and near the Niagara Falls. It is called Peach Haven. It is here that the colonel has been for some years engaged in planting out large orchards.”

Messrs. Manly are to be his successors in the management of the old Buffalo nurseries.

The Prairie Farmer will suffer a serious loss in the withdrawal of one of its most energetic editors. The last number contains the valedictory of Mr. Wright, who has contributed so much and so long to the richness and raciness of its dicta.

Curculio Premium.

DR. JOHN A. WARDER:

Dear Sir,—Your favor of June 1st, enclosing a remittance for invoice of Curculio, is duly received, and the amount will be appropriated according to the suggestion of your friend Mr. McWilliams, as a premium for the best method of doing away with the curculio, or its ravages. In my August

number I shall publish this fact, and shall add fifty dollars to the amount, inviting others to unite for the purpose of swelling the premium to a sufficient sum to induce a fair investigation of the subject. When in type, I shall send you a proof, and should be obliged for your further co-operation.

I remain, sir, yours respectfully,

JAS. MAPES.

NEWARK, N. J., June 21, 1852.

The subjoined has since been received in slip, and is cheerfully laid before the public, with a commendation to others who may feel disposed, to add to so worthy a cause. Our Horticultural Society has already made a large offer for a similar purpose, and I will add a suite of the *Western Horticultural Review* to the successful party, if a committee of our Society be added to the list of judges.

“We have daily applications from correspondents, for information relative to the best method of getting rid of the curculio. This “little Turk” has rendered the growing of smooth-skinned fruits almost impracticable; and it is high time that serious attention should be given to its extermination, or at least to discover some remedy to do away with its ravages. We have received from Mr. McWilliams, of Cincinnati, through the hands of Dr. John A. Warder, of the *Western Horticultural Review*, five dollars, to be given as a premium to the discoverer of any method, practicable in its character, which shall enable us to keep clear of the ravages of the curculio. We beg, on the part of the *Working Farmer*, to add fifty dollars to this sum, and we should be happy to receive intimation from such friends of Horticulture as are willing to add to this premium, giving authority to the successful competitor to call on them for the sum named. We propose that the amount whatever it may be, shall be given to the first discoverer, and the merits of his discovery, as to its entire efficiency, be decided upon by a committee of the New York State Agricultural Society, of the American Institute of the city of New York, or of the Massachusetts Horticultural Society; the certificate of a committee of any of these societies to be our voucher for paying over the

premium, and giving orders on those who have volunteered to add to its amount. We ask the co-operation of the agricultural press for the carrying out this object."

State Pomological Convention,

AT COLUMBUS, AUGUST 31ST, 1852.

Agreeably to a resolution adopted by the last Ohio State Pomological Convention, held at Columbus, December, 1849, it is the duty of the undersigned to make the call for the next session.

Therefore, in pursuance of such duty, and after correspondence with gentlemen in various parts of the State, we hereby request all persons interested in the subject of fruit culture to assemble in convention, at Columbus, on the 31st day of August, 1852.

It is desired that fruit growers not only will bring specimens of fruits, ripe at that time, for exhibition and comparison, but that they will also bring with them notes and observations relative to varieties ripening at other seasons.

Fruits intended for exhibition, or communications therefor, from those who can not attend in person, may be directed to the care of M. B. Bateham, Columbus.

A. H. ERNST, *President.*

J. A. WARDER, }
F. R. ELLIOTT, } *Secretaries.*

The time may to some appear early, but it is not so if they call to mind the fact that the National Pomological Congress commences September 13th; that the New York State Fair is to be held September 7th; that our Ohio State Fair will be held on the 15th, and then looking to the Pomological Congress, for the evident expectation which may be held by that body toward Ohio pomologists and especially toward us in convention, Ohio having been the first State to lead off in convention with a view to correct nomenclature, and at the same time advise varieties for certain locations.

Again, it will be recollected that heretofore our conventions have been at such times as to preclude any show of Peaches, Plums, or early Apples and Pears. The present call will give us an opportunity to examine many varieties of these fruits, and also to hear reports from sections where they have been destroyed by winter's rigors or late spring frosts. It is not only an examination of varieties that have been successfully cultivated that is wanted at these conventions, but full as explicit statements of partial success or failure of others; and we hope for the good of Pomological science and as an aid to its further demands on the public, that our people will one and all make notes of such fruits as they have grown, and if not convenient to attend in person, that they will write out their observations and forward them to this Convention.

Let us have a meeting which shall be enabled to forward a report to the National Convention creditable to our State, creditable to us as pomologists, and this forwarded by such delegates as will examine and note all fruits in the Congress, and be enabled to give us, when we hold a winter session, a return that will repay us "an hundred fold." Collections of fruits are to be forwarded by the delegates to the Congress: growers will please bear this in mind, and where they have abundance, retain a portion on the tree to be forwarded the next week to such delegate as may reside nearest.

It will be recollected by our readers that we have advocated the establishment of a State Pomological Society—which shall become incorporated by our Legislature, and have a claim on the State funds for aid in its work of advancement toward the culture of all horticultural products. We shall bring up this subject at the coming Convention.

Perfect drainage is essential to good farming.

Harvesting Machines.

A proud day for Ohio was the 30th of June, and proud days were they which succeeded, when the great trial of reapers and mowers was held before the Ohio State Board of Agriculture. The competition was held upon a beautiful farm near the town of Springfield, Clark county, and several enterprising manufacturers and inventors were upon the ground, all vying with one-another in good feeling and in a determination to win the medal. This emulation of good feeling was truly praiseworthy.

A judicious committee of practical men had been selected by the State Board, men who manifested a determination to give the matter a thorough investigation, and whose decision is worthy of confidence. They rendered the following

REPORT.*To the Ohio State Board of Agriculture :*

The committee being desirous of managing this trial of machines in such manner as would most fully accord with the views of the exhibitors, as well as subserve the interests of the public, invitation was given for the manufacturers and exhibitors of the machines to meet with the committee, at the Anthony Hotel, Springfield, on the evening preceding the first day's trial; at which meeting a free interchange of opinions was had, and suggestions were made by various exhibitors in regard to the rules adopted by the committee, and the best mode of conducting the trial. The utmost good feeling was manifested, and the committee expressed a willingness to comply with the wishes of the exhibitors in regard thereto, as far as their wishes had been expressed, and when not in conflict with the rules as published.

A call was then made for entries of the machines to be tried, and the following is the list :

1. Palmer & Williams' Self-Raker, Brockport, New York.
2. C. H. McCormick, Reaper and Mower, combined and attached, Chicago, Illinois.
3. A. J. Purviance, attach and detach Reaper and Mower, Warrenton, Jefferson county, Ohio.

4. Hussey's improved Reaper, by Minturn, Allen & Co., Urbana, Ohio.

5. Hussey's improved Mower, by do.

6. Haines' Illinois Harvester, Pekin, Ill.

7. New York Reaper, by Seymour, Morgan & Co., Brockport, New York.

8. Densmore's Self-Raker, by Warder & Brokaw, Springfield, Ohio.

9. S. P. Casle's Mowing Machine, Urbana, Ohio.

10. A. J. Cook's Reaper and Mower, by Hatch, Whitely & Co., Springfield, Ohio.

11. B. Smith's Grain and Grass Cutter, Batavia, Illinois.

12. Ketchum's Mowing Machine, by Howard & Co., Buffalo, New York.

The first day's trial of Reapers, was on the farm of Dr. J. A. Warder, about two miles north-east of Springfield. The field was mostly level, and free from obstructions, excepting a few apple-trees. The wheat was of fair average growth, and yield, stood up well, and was rather green for harvesting.

All the machines were tried, as many rounds each as the time would allow, and with the exception of two or three which were somewhat imperfectly constructed or not properly adjusted, all performed the work well. The day was fine, and a large concourse of spectators was present and manifested much interest in the exhibition. Indeed so eager was the crowd to witness the performance of each machine, that it was at times difficult for the committee to obtain a fair comparison of the respective work.

After a day spent in the trial of Mowing machines, the trial of Reapers was resumed, on the farm of Mr. Foster on the National Road, one mile south-east of the former field. The ground here was more rolling, with some stones and stumps; the grain well ripened, and in some parts considerably tangled and lodged, thus affording opportunity to test the working of the machines under adverse circumstances.

No. 1. *Palmer & Williams' Self-Raker*, the committee regard as perhaps destined to be of value. It has a reel in front, similar to McCormick's, and is designed to rake off on the side. The Raker attachment is a very ingenious contrivance, and may succeed well, but it has not been thoroughly tested as yet, and owing to the defective construction and breakage of one or two small parts, it did not work satisfactorily.

No. 2. *McCormick's Reaper* was repeatedly tried in both fields, and when the raking was done by very expert hands, it performed well; but still, in comparison with several others, the committee thought this machine did not quite maintain its world renowned reputation. It cut the grain very well, a wide swath (six feet,) but it requires more strength of team than most others—three or four horses in stout grain—and also much skill and hard labor on the part of the raker, who rides backward on the machine, working in a straining position. The gavels are deposited on the side, so as to leave the track clear for the next round of the team. The machine is durably constructed, as was shown by running unexpectedly against a stump, when at full working speed, without sustaining any damage.

There may be an objection to the working of McCormick's machine in the great *side draft* upon the wheel horses, which can only be remedied by additional force attached to the end of the tongue.

No. 3. *Purviance's Reaper* also performs the cutting part admirably, and its mechanical construction is of the best character. It has a reel forward, and the raker sits sideways on the machine, and deposits the grain behind in the same manner as Hussey's; which may be urged as an objection, as the grain must be taken up before the machine can make a second round. Indeed, the machine very nearly resembles Hussey's, with the exception of the reel. It is also rather too hard work for one pair of horses,—resembling, in this respect, both Hussey's and McCormick's.

No. 4. *Hussey's Improved Reaper*, by its simplicity of construction, (being destitute of reel, etc.,) and its evident durability, impresses the committee, as it does all spectators, quite favorably. It also performs the work in a very satisfactory manner in most situations. The absence of a reel to bend the grain on the knives renders it somewhat difficult to cut with the wind, or in slanting grain, unless it leans toward the machine. It also requires rather greater speed of the team than is usual for farm horses, or than is necessary for machines with reels. On the other hand, it is objected to the reel, that in fully ripe grain it may cause a little waste by shelling when driven too fast. Hussey's machine is also partially liable to the objec-

tion of side draft upon the team. Its width of swath is five feet—selling price, \$115.

No. 6. *Haines' Illinois Harvester* differs essentially from all the others. The horses work behind, propelling the machine before them, and it is designed only to cut off the heads of grain, with twelve to eighteen inches of the straw, which is carried by a revolving apron, up on to a wagon, having a large rack or frame, which is driven along by the side of the machine for the purpose, and when filled, is taken to a barn or rick to be emptied, and another takes its place. The machine is quite ingeniously constructed, and works very well, only it is too large and cumbersome, and requires too many hands and horses for Ohio farms, however well it may answer on the broad prairies of the West. This machine can be worked so as to cut nearly as low as others, and rake the grain off at the side for binding, but it is still difficult to guide and manage, and requires a man to steer, besides the driver and raker. As a curious specimen of prairie farming machinery, it afforded much interest to spectators. Its width of swath is eight feet—price, \$230.

No. 7. *Seymour & Morgan's New York Reaper* was much admired for its lightness of draught, and quiet easy running; whilst it also performed good work. The gearing of this machine differs somewhat from all the others, and is believed to be a decided improvement, securing lightness of draught, with less noise and friction. The position of the knives, also, being in a line with the driving wheel, gives the machine advantage when crossing furrows or other inequalities of surface. The raker is stationed on the rear of the platform, facing his work, and shoves off the gavels on the side; but like others of this kind, it was difficult for the raker to avoid scattering the grain; and in heavy and tangled wheat the machine occasionally choked. With a little further improvement this will be found a first-rate machine. Its width of swath five feet—price \$120.

No. 8. *Densmore's Self-Raker*, like several others, does the cutting part in first-rate style, and in addition, rakes off the grain in a very satisfactory manner on the side, thus dispensing with the labor of one man, and thereby having superiority over all the machines. The raker attachment of this machine is a very ingenious and effective, yet

simple contrivance, and does not seem liable to get out of order. It may be objected that this and other self-raking machines can not deposit the grain in handsome gavels where it is tangled and lodged; but in the opinion of the committee, this machine does the raking in all conditions of grain as well or better than is done by hand with the other machines raking off at the side. In its mechanical construction, ease of draught, etc., this compares favorably with the other machines. Its width of swath is five feet ten inches—selling price, \$140.

No. 10. *A. J. Cook's Reaper* does the cutting well, and is designed for a self-raker, but owing to a want of sufficient experience with its use, or of mechanical skill on the part of its inventor, it does not do the raking in a proper manner. The committee, however, are of the opinion that it can be made an excellent machine. The raker is combined with the reel which bends on the grain, and is quite a simple and ingenious invention. It is commonly made to rake off behind, but it is also designed to deliver on the side by the attachment of a revolving apron. This, however was not done in the presence of the committee. It is sold at \$100 to \$120.

No. 11. *B. Smith's Reaper*, like the other from Illinois, is something of a novelty. The forward part of the machine is attached to the forewheels of a common farm wagon. In other respects it does not differ very materially from other machines. The raker stands on the back part of the platform and rakes off at the side. Where the grain stood well, and with careful driving, it did pretty fair work.

MOWING MACHINES.

No. 2. *McCormick's Mowing Machine* is the same as his reaper, only changed by removing the platform and setting it to run closer to the ground. For some reason not explained to the committee, it did not work satisfactorily at the trial, frequently requiring the weight of one or two men on the machine to keep the knives close enough to the ground.

No. 3. *Purviance's Mower* is also of the combined or convertible kind, being only his Reaper with the platform removed, and the running parts placed nearer the ground.—These alterations are very easily made with this machine, and it worked quite fairly as a mower; still was not as good as the machines constructed only for mowing, and the com-

mittee do not feel warranted in recommending a premium for "combination" machines, as in their opinion no machine will do both kinds of work so perfectly as those made expressly for each. They would suggest that where a farmer does not feel able to buy both a Reaping and a Mowing machine, that he should unite with a neighbor,—one buy a Reaper, and the other a Mower.

Smith's (Illinois) Mower was also of the combination kind. It came into the field too late to have a fair trial, and was imperfectly adjusted in some of its parts, so that it failed to do good work.

No. 5. *Hussey's Mower*, like his Reaper, is quite simple in its construction, and consequently not liable to get out of order. It did its work well, and like the Reaper, requires a team of three or four horses.

No. 9. *Castle's Mower* is a very creditable machine—quite new, as yet, and needing some improvement in the way of securing greater strength and durability. It has a reel to bend on the grass, cuts very smooth and clean, and is of light draught. It cuts with two series of knives, attached to a double crank, working like shears. The committee, without further experiment, have some doubts as to the successful operation of this form of knives, when they become a little dull.

No. 12. *Ketchum's Mowing Machine*, though named last, was the first to enter the field, and its performance, as a whole, was not quite equaled by any of its competitors. It is also the most simple and durable in its construction, and quite easy of draught, requiring a team of two ordinary horses. Its cost is \$110.

SIDE DRAFT.—The position of the driving wheel upon Densmore's and Seymour & Morgan's Reaping and Ketchum's Mowing Machines, is such as to balance the resistance; and under ordinary circumstances, to obviate the inconvenience of side draft, even when driven with a single team.

RULES FOR JUDGING OF THE COMPARATIVE MERITS OF THE DIFFERENT MACHINES.

The committee, according to previous advertisement, were governed by the following rules in making their awards, and deciding upon the comparative merits of the several machines, viz:

1. Which machine cuts the grain or grass in the best manner.

2. Which does the most work in a given time.

3. Which leaves the grain in the best order for binding.

4. Which causes the least waste.

5. Which is the best adapted for uneven surface.

6. Which is the least liable to get out of repair.

7. Which is the least cost.

8. Which requires the least power to drive the machine.

9. Which requires the least manual labor.

10. Which is the best adapted for stony or stumpy ground.

Whichever of the machines so tried, has, combined, the greatest number of the above qualifications, in the opinion of a majority of the committee, to be pronounced the best machine.

The committee in Springfield, deciding upon the above qualifications as found in the several Reaping machines, took a vote upon each rule separately, to see which of the machines was first or best in regard to that point; and if several were thought to be alike good, they were so set down. In these decisions, the votes of the committee were unanimous.

COMPARISON OF REAPING MACHINES.

Rule 1. *Which machine cuts the grain in the best manner*—Hussey's, Densmore's, Seymour & Morgan's, McCormick's, Purviance's; all nearly or quite equal.

2. *Which does the most work in a given time*—McCormick's, Densmore's, Purviance's. Others that cut a little narrower swath were regarded as nearly, if not quite equal, under this head, owing to their greater speed.

3. *Which leaves the grain in the best order for binding*—Densmore's, Purviance's, Hussey's.

4. *Which causes the least waste*—Hussey's, Purviance's, Densmore's.

5. *Which is the best adapted for uneven surface*—Seymour & Morgan's; but those above named very near as good.

6. *Which is the least liable to get out of order*—Hussey's, with Seymour & Morgan's next.

7. *Which is the least cost*—Hussey's.

8. *Which requires the least power to drive the machine*—Seymour & Morgan's and Densmore's.

9. *Which requires the least manual labor*—Densmore's.

10. *Which the best adapted for stony or stumpy ground*—Hussey's, McCormick's, Purviance's, Seymour & Morgan's, Densmore's; alike.

PREMIUMS.—the committee recommend that the State Board award a Gold Medal, as first premium, for Densmore's Reaping Machine, by Warder & Brokaw; and a Silver Medal, as second premium, for Hussey's Improved Reaping Machine, by Minturn, Allen, & Co., Urbana.

COMPARISON OF MOWING MACHINES.

Rule 1. *Which machine cuts the grass in best manner*—Ketchum's, and Casle's.

2. *Which does the most work in a given time*—Ketchum's, and Hussey's.

5. *Which is the best adapted for uneven surface*—Ketchum's.

6. *Which is the least liable to get out of repair*—Ketchum's, and Hussey's.

8. *Which requires the least power to drive the machine*—Casle's.

9. *Which requires the least manual labor*—Ketchum's, and Casle's.

10. *Which is the best adapted for stony or stumpy ground*—Ketchum's, and Hussey's.

PREMIUMS.—The committee recommend that the Board award a Gold Medal as first premium for Ketchum's Mowing Machine, by Howard & Co., Buffalo, New York; and a Silver Medal, as second premium, for Hussey's Machine, by Minturn, Allen & Co., Urbana.

The committee feel that there is much credit due to the officers of the Clark and Madison Agricultural Society, for their prompt and efficient aid in making the necessary preparation for the trial of Reapers and Mowers at Springfield; and also to certain individuals for furnishing grain to try the experiment upon, and horses to work the machines, and for their constant attention to the wants of the committee, the exhibitors and spectators throughout; and further, to the marshal, assistant marshal and police, for their efforts to preserve order, and give all an opportunity to see and be satisfied.

The operation of Haying and Harvesting machines was comparatively new to a large portion of those in attendance, and a portion of the committee had previously enjoyed only limited opportunities for observing the prac-

tical working of most of the principles involved. All were very strongly impressed with the importance of such labor saving machinery in agriculture, thus enabling the farmer to secure a large crop, at the right time, with unprecedented dispatch, and also with less waste than usually attends the ordinary manual labor methods.

The committee have full confidence in recommending these machines to the farmers of Ohio, believing that their use in the harvest field will give general satisfaction, and lead to improved modes of husbandry, alike economical and profitable. They would also urge upon manufacturers the great importance of so thoroughly constructing their im-

plements as to obviate complaint, for which too frequent cause is given, of breakage or derangement of working parts, by which much time is lost in repairs, and the credit of the machine not a little damaged. The timber should be chosen of the most durable kind, the smaller irons should be carefully wrought, not cast, and the general workmanship of a good and substantial finish.

- J. T. PUGSLEY, *Convenience, Fayette Co.*
- A. WADDLE, *South Charleston, Clark Co.*
- WM. HUNT, *Springfield, Clark Co.*
- JOHN KEILER, *Bell Brook, Greene Co.*
- DAN'L McLEAN, *Washington C. H., Fayette Co.*
- JOHN S. HALL, *Columbus.*

METEOROLOGICAL TABLE.

CINCINNATI, JUNE, 1852.

THERMON.			WEATHER.			RAIN.	WINDS.		
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.				
1	58	88	clear	clear	clear ....	....	1	Light SW.	
2	67	86	variable .	do.	do. ....	....	2	Calm; light SW.; calm at eve.	
3	75	88	clear	var., rain	rain	1.80	3	Light SW.; brisk SW. and W; high at night;—	
4	58	72	cloudy...	clear	clear ....	....	4	Light N.; brisk N.; light N. [thunder.	
5	50	75	clear	do.	do. ....	....	5	Calm; light SE. and E.	
6	55	80	do.	do.	cloudy...	....	6	Calm; light S.; brisk SW.	
7	67	76	cloudy...	variable .	variable .	....	7	Calm; light NW. [Fireflies.]	
8	60	66	var., rain	clear	do. ....	.30	8	Light NW. and SW.	
9	56	71	clear	rain	clear ....	.25	9	Light SW.; high SW.; light SW.	
10	64	72	cloudy...	clear	do. ....	....	10	Light W.; calm at eve.	
11	54	75	clear	do.	do. ....	....	11	Calm; calm.	
12	55	81	do.	do.	var., rain	.10	12	Calm; light S.	
13	66	91	variable .	do.	clear ....	....	13	Calm; light SW.; calm at eve.	
14	69	92	clear	do.	do. ....	....	14	Light S.	
15	73	89	var., rain	do.	do. ....	.45	15	Light S.; thunder.	
16	72	91	clear	do.	do. ....	....	16	Light S. and SW. [Raspberries.]	
17	69	90	do.	do.	rain ....	.15	17	Light SW.; brisk SW.; brisk W.	
18	74	75	rain	rain	cloudy...	1.45	18	Light SW. and W.	
19	66	86	cloudy...	clear	clear ....	....	19	Light SW.	
20	69	89	clear	do.	do. ....	....	20	Light SW.	
21	68	91	do.	do.	do. ....	.05	21	Light SW.; brisk SW.; light SW.; shower at n't.	
22	71	79	do.	do.	do. ....	....	22	Light W.	
23	61	66	cl'y., rain	rain	rain ....	.70	23	Calm; light E.; light NE.	
24	60	80	cloudy...	clear	clear ....	....	24	Light N. and W.; brisk NW.	
25	54	75	clear	do.	do. ....	....	25	Light N.	
26	57	80	do.	do.	do. ....	....	26	Calm; light S. [Tomatos.]	
27	62	80	cloudy...	do.	do. ....	....	27	Light SW. and W., calm at eve.	
28	65	85	fog, clear	do.	do. ....	....	28	Light SW.	
29	65	88	clear	do.	do. ....	....	29	Calm; light NW. and SW.; calm at eve.	
30	68	88	do.	do.	variable .	....	30	Light SW. and W.	

Inches, 5.25

Clear days in the month.....12
Variable—sunshine at times,16
Cloudy—sun not visible,..... 2

Mean temperature of the month.....	72.36
do. do. May, 1851,.....	73.94
do. do. do. 1850,.....	76.29
do. do. do. 1849,.....	76.96
do. do. do. 1848,.....	72.14
do. do. do. 1847,.....	70.36
do. do. do. 1846,.....	69.84
do. do. do. 1845,.....	74.00

The quantity of rain, this month, is considerably over the usual average.

REMARKS.—The weather of this month has been quite pleasant, though somewhat under the usual mean temperature, ranging from 54° to 92°; with a bountiful supply of rain, causing an unusual freshness and vigor of vegetation.

JOHN LEA.

Univ. of
California



M. H. & S. C. 1884

ST. ANSGAR'S CHURCH.
CHICAGO.



Vol. II.

SEPTEMBER, 1852.

No. 12.

CLOSE OF THE VOLUME.

At certain periods in the advance of human affairs, both great and small, it is well to make a pause, that we may look around us and ascertain the nature of the ground upon which we stand, the character of that which lies before us, and review the nature and events which distinguish that over which we have passed. Upon such occasions, it is wise for the diffident to scrutinize thoroughly the appearance of the obstacles which lie in our way, ascertain whether they may be surmounted, and if they seem formidable, weigh them against those which have been already overcome, if perchance they may not prove to be really less to be dreaded than those behind us—like the mountain range which presents itself across the track of the weary traveler, rising dark and gloomy in his way, and threatening to cut off all hope of progress; but turning back a glance at the elevations he has easily surmounted in the course of the journey thus far, they appear to be frowning down upon him with their dark and beetling ranges, quite as terrible as those in the front.

Gentle reader, we have now reached one of those points. This number of your monthly visitor in the green jacket, completes the second volume of the Western Horticultural

Review, a periodical that has modestly set up its claims upon your attention within the past two years; this, therefore, is a good time for the editor to exchange a few words egotistic with you. Why the numbers appeared at all upon your tables, or asking support of those interested in Horticultural and rural affairs, when two parallel works existed in our country, ably conducted by Downing and Hovey, has already been sufficiently set forth.

It was to gratify no selfish vanity, to appease no itching furor to write 'himself into notoriety or business, and, by no means, with any expectation of courting mammon, that this enterprise, with all its known and unknown difficulties, was undertaken by your friend, the Editor. On the contrary, he was in the extensive practice of an honored and useful profession, surrounded by those who were kind enough to think him the peculiar friend upon whom they could rely in the dark hour of sickness and trouble. All this has passed away. Engaged in another pursuit, and of so diverse a character, of so absorbing interest, and calling upon so much of his time, both at home and abroad, it has been impossible for his best friends to retain that kind confiding dependence upon his earlier services, which is so necessary to maintain in

its proper condition the delicate and important relation referred to. The sacrifice, painful as it is, has been made for the cause of Horticulture; and to it he must henceforth turn his eyes, as to the bright particular star of his destiny—to it he must look for cheering refreshment, amid the labors of the way, and to its friends for aid and support, both moral and material, wherewith to continue the struggle; nor does he, nor will he look in vain. Difficult as the future may appear, what is it to the past! The great effort has been made; the Rubicon has been long crossed, and many a formidable difficulty has already been overcome by dint of persevering effort, and which, now, in the rear, resemble, in the prospect, the beetling crags of future or impending obstacles. So far from having been induced to incur these difficulties and vexations by selfish vanity or desire for notoriety, the greatest hindrance in the way of the Editor's progress has been, a shrinking diffidence of his own powers, and an unwillingness to be thrust forward into prominent positions that have been kindly pressed by the generosity of the best of friends. So painful has this feeling been at times, that it appeared impossible to avoid giving offense by the ungracious reception of such favors. The critical reader must have been frequently struck with this foolish shrinking, which may have appeared even ridiculous to some of a different mold and of sterner sentiment. At other times, when attempting to throw off this troublesome shirt of Nessus, the revulsion may have been so great as to shock those readers of finer sensibilities, who were aware of his unwillingness to be prominent, and were surprised at the change.

The difficulties in the commencement and continuance of such a journal as this, none know nor can imagine who have not been themselves connected with a similar enterprise. Thanks to kind friends, however, and

persevering efforts, they have been measurably overcome; and that, too, without the invaluable services of an experienced publisher—ay, without any publisher, since that important function has, from the first, devolved upon the Editor, who has been forced, by sheer necessity, to act in his own creative, scissorial and corrigent capacity, to superintend all of the mechanical details in each department, and then, though all unqualified, to discharge the duties of *publisher*, and to enact the drudgery of distributor, and even attend to the mailing of the packages.

Like the mountain in the way, these difficulties, formidable as they did appear, were overcome, one after another; and though presenting a terrible array in the retrospect, they cheer me onward with the satisfactory encouragement, that as they have been overcome, new and prospective difficulties may also be vanquished as they appear.

And now, a word for that future into which it is natural to look at such a period in the life of a serial, which, though closing its annual *curritus*, aims to be perennial in its continued career. Heretofore two formidable rivals have occupied the course, and have long been alone the highly respectable occupants of the field of Horticultural journalism. Both works have been conducted by leaders from whom I have been, and should have continued to be, proud to receive instruction—from both of whom the country at large has long received the most valuable teachings. But, alas! he to whom all have been accustomed to render the highest meed of praise, as to the best horticultural writer and teacher of our country, has been removed from among us by a terrible and crushing dispensation—a blank, a void is left, which will not soon be filled! He has suddenly, and by an awful calamity, sunk from his commanding position. . . . Without claiming to have been at all compeers, we were yet friendly com-

petitors. All, with me, must wish to be considered as mourners in the sad event which has transpired, and warned by it, as by every similar catastrophe, we must think less of earthly things, which are held by so slight a tenure, that may be snapped in the twinkling of an eye!

Other journals have sprung up, and others will arise, devoted to the same subjects; but excellent as they are and may become, those who have the field, and respectably retain their position, will maintain their ascendancy. Amid every opposition, and all fair and honorable competition, the West and South, hills, valleys and prairies, must and shall be provided for. Nor will it be the object of the Editor to exclude patronage from the great *East*. No! the country, the whole country is before him, and to it he addresses himself, asking its favorable smiles and kind support. He feels assured that a rich harvest of each is waiting for him to pluck; and is anxious, by every honorable means, to throw himself in the way of gathering that support which is ever so needful to the healthful life of a monthly periodical, dependent upon popular smiles for its existence. Western in its character it must be, *ex necessitate*, having been commenced, conducted and supported especially by those who have strong Western predilections; but, thanks to our glorious Union, we are all Americans, and feel a general interest in the whole country.

This is a good time to exchange a few words of a practical business nature with the readers and contributors of the *Western Horticultural Review*. To all, I am well aware, that while returning thanks, there are apologies also due. The various labors that have occupied the mind of the Editor have unavoidably caused him to overlook some errors of the compositor, which have made the communications appear different from what was intended by the writer; as on page

—, an elderly gentleman is made to say, "forty years ago, when beating the *hoop*," for hoof. Incidents of this kind are mortifying, but it is almost impossible to avoid them. Some communications and some letters of inquiry have been overlooked,—that is, they were laid aside until the necessary information could be obtained, and then, in the press of other, newer and more urgent business, they have been forgotten from being out of sight. All interested in such, must have patience with the shortcomings of the Editor,—or else, come and share his labors with him, until they can take a few lessons in forbearance and long-suffering under accumulated irritating causes. Others complain of the freedom of editorial correction applied to their effusions. This is regretted, because all changes of verbiage that were ventured upon have been made with the earnest desire to benefit the appearance of the communications, as well as of the *Review*, in both of which the Editor should be allowed to have a sort of paternal pride.

And now, good reader! farewell, with the close of the Second Volume. That you and many more than yourselves may be preserved in agreeable relations with this periodical these many years, that we may render each other mutual services during the rolling seasons, and exchange agreeable salutations during the ides of October,—during many, many returns of that charming month, when the garners are full and our hearts should be thankful, and when subscriptions are *expected* and most heartily welcomed; ever welcome though they be to the hungry printer.

ADULTERATION OF GUANO.—Prof. Norton says: "The most barefaced impositions are practiced in England, certain parties having sold a species of loam resembling Peruvian guano at a high price, the bags having been dusted, both inside and out, with some of the real article, to counterfeit the true smell."

Miscellaneous.

NOTES FROM MEMORY.

DURING the past month of June, the writer spent two weeks very agreeably in journeying from Chicago to the capital of our state, and through the region round about. Perhaps some random notes of the country may not prove uninteresting to the readers of the Review.

CHICAGO.—Somewhere about twenty-five to thirty years ago, when there was but one steamboat on the great western lakes, and when Ohio and the old town of Detroit were the limits of the Great West in this direction, I frequently heard something of a little stockade fort, near the mouth of a sluggish bayou known as Chicago River,—a name repulsive to the poor Indians, who seldom visited the spot except on business.

By the way, I am told that a few of the old Red Men were here, the other day, on a visit to their good white friend, John H. Kinzie, Esq. Indians *do* express surprise and admiration when unrestrained by policy; and I would give much to hear what they had to say of the works of the White Man for the last fifteen or twenty years, in this their old trading post and treaty ground, and the country round about. The change here has been unprecedentedly great. For every squatter's cabin nestled in the timber borders throughout this vast region of the upper lakes and Upper Mississippi, which they might have found some twenty years ago, they can now count a city, or a large village aspiring to that rank; and over the broad prairies, in which no one thought of building then, they find "shingle palaces" as thickly dotted as they were in the very midst of Chicago a year or two before the

exodus of these old owners of the soil; a city of fifty thousand inhabitants, sprung up from a frontier post and a few hundred traders and speculators, in a little over eighteen years,—and an immense extent of country, containing at most a dozen or two squatters and a few Indian traders then, now as thickly peopled and as well cultivated as many of the oldest parts of the Union. But I am forgetting what I intended to say in the second paragraph.

Some twenty-five or thirty years ago, when I resided in the little village of Buffalo, I had a friend, (the late Dr. Jameson,) a Seneca Indian, who knew this country, for he had visited it with others of his tribe.—Our medical preceptor was then engaged in "speculating in city lots," and with us he often speculated on the destiny of future cities as well. He advised us to go to Chicago, and take our chances for fortune there.

I think that we were then in the habit of putting down Buffalo for one hundred thousand, and Chicago for fifty thousand inhabitants in 1850. Had the Erie canal enlargement been completed five years ago, as it should have been, and had our canal and existing railroads been in operation only two years sooner, I wonder how far wrong our estimate would have proved? No one will now think me decidedly crazy, if I put down Chicago for a quarter of a million of inhabitants in another quarter of a century; and some of us dream of having half a million then, and on much better grounds, too, than our "wild dreams" of twenty-five or thirty years ago were based.

But what has all this to do with horticultural

ture? Oh, I am coming to that, presently. Who does not know, that in the battery of heroic names, Chicago boasts that of *The Garden City of the West*! Have horticulturists nothing to do with this professional assumption? Will the Queen City of the West—with her vine-clad hills, her glorious fringe of trees, and thousand sparkling gardens—permit her young sister to retain the title unquestioned, if she continues much longer to plant *cotton-woods* instead of MAPLES, and half as many *locusts* as ELMS?—And truth to say, I fear the great abundance of these cheap deciduous trees constitutes her chief title to the name of a Garden City. There are, however, a few very creditable private gardens in the city, and quite an extensive taste for trees, with little knowledge and less taste exhibited in the selection and introduction of them. With one well marked, and half a dozen praiseworthy exceptions, there are few or no conifers to be found in grounds where they would thrive admirably; and the few which are planted, though obtained for “evergreens,” are seldom *green* beyond the first month of summer. The whole lake shore is covered with beautiful trees of this tribe; and why should the citizens pay from fifty cents to three dollars to nursery-men, for no better grown specimens, when tree peddlers and boatmen will deliver theirs for three dollars per hundred? And yet there were once over a dozen nurseries in and about Chicago, not half of which have had to wind up yet, for want of patronage. Indeed, there are five or six quite respectable establishments now in operation near the city; but, good sooth, all who are near enough to the market, sell more culinary vegetables than “florist’s flowers,” or choice plants and trees. But there is time enough for this to mend; and nice salads are very good, while one can get fresh oil, or even real cream, to dress

them with, and cabbages are highly nitrogenized vegetables, and help out a Graham-ite very considerably; but I fancy that a love for these can scarce make one a florist, more than much affecting pie-plant makes people pomologists, or planting poplars, arboriculturists. Communities may think differently, but horticulturists have queer notions.

Our Chicago Horticultural Society, which started off so handsomely at first, now “meets” (in the language of its most efficient member) “semi-occasionally only,”—in fact, once in two years. The little village of “Little Fort,” which started up, the flourishing town of Waukegan, only the other day, is now beating Chicago in her “Lake County Horticultural Society;” and Milwaukie, Racine, and Kenosha, all have better gardens than “the Garden City,”—and certainly beat it a long way in trees, and in the gardenesque character of the surrounding country.

Except a very manageable soil, and her glorious expanse of lake, Chicago has few of the natural elements of the garden. There are some beautiful and exceedingly graceful weeping elms where God planted them; but because nature has need of the rapid growing cotton-wood (*Populus angulata*) to bind together a loose soilless sand—half the time under water—and help convert it into dry fertile land, is *that* any excuse for the people of a “garden city” choosing this tree in preference to the elm? And need they confine themselves to three or four varieties of trees, any way? There is no state in the Union where there is a greater variety, fitted for city planting, than in Illinois. And all the shores and islands of the lake are open to us; and the nursery-men will furnish choice trees, (not one in one hundred of which should die,) when the people get ready to pay the cost of ten dead, for a live one.

Now, friend Warder, I have written this to try and wake up the planters of Chicago, and to bring the question before the tribunal of Western Horticultural Societies—whether this Chicago shall continue to retain a designation “by courtesy,” which she makes so few, and such unprofessional attempts to deserve by right of preëminence?

Your opinion, and that of your readers, is most earnestly solicited on this point; and in the meantime you will remember, that as an interested nursery-man, I was

bound to make the worst of it. Perhaps, when you visit us, you may find as much public as individual taste in planting; for Chicago has public grounds, capable of being made much of, even superior to the Battery in New York, or any public promenade in the whole West—an avenue a mile long, with its whole face open to the ever-brilliant field of Lake Michigan. But enough for today.

JOHN A. KENNICOTT, M.D.

THE GROVE, ILLINOIS, July 20th.

DRAINAGE.

THIS is a subject which appears to belong rather to the farmer than to the gardener, but this is not so; for as the garden is smaller, so much the greater the necessity of having this smaller space the more thoroughly prepared by draining, trenching, and, if possible, *irrigation* also. Thorough trenching has already been urged upon those who are preparing a garden, and perfect drainage is now equally recommended, since witnessing the effects it has produced in the gardens of Mr. Suydam, and Capt. Daken, in the beautiful village of Geneva. In the same neighborhood, it was my privilege also to see the fine farm of Mr. John Johnson, referred to below.—ED.

The advantages of drainage have heretofore been much undervalued by American farmers. Although many have admitted that the system has been of great importance in Great Britain, it has been held that it is comparatively inapplicable to this country, owing to the difference in our climate—the climate of the British Isles being too moist for any kind of vegetation, and ours too dry. But the supporters of this argument overlook several essential points which belong to the case. The first is, that though our climate is more arid than that of Great Britain, the annual fall of rain here is greater than there, and we have a much greater proportion of fair weather. Our rains fall

in more sudden and copious showers, and evaporation is more rapid. The result is, that the earth is more heavily beaten, and under the effects of evaporation becomes more closely packed than it would be if the same quantity of water occupied more time in falling, and the number of drying days were less.

Now it is, in part, the effect of drainage, to obviate the evils which are thus produced—to prevent this consolidation of the soil, caused by the combined action of rain and sunshine—an effect which, by keeping the water too long on the surface in a wet time, and by baking the soil hard in a dry time, exposes the crop to the alternate extremes of wet and drought.

But how can drains produce this result? The answer will be readily given, by persons who have witnessed their operation. By forming a constant outlet for the water, they prevent the soil from becoming so surcharged that its particles are run together in the form of mortar—the water passes directly through the drains as fast as it falls; the soil, therefore, remains open and friable; when the rain ceases, it does not bake, but is kept in a condition favorable to the growth of crops. It is plain, therefore, that drainage operates as a remedy against both wet and drought.

The introduction of tile drainage into this country is of recent date. Until within four or five years, the few tiles that were used here, were made in a rude and expensive way. Chiefly through the instrumentality

of a few individuals, however, the most approved English and Scotch machines have been brought into use, and others in imitation of them, or perhaps with some improvements, have been made here, and the manufacture of the article is extensively carried on at several establishments in the state of New York. The favorable results of the first examples in drainage, have induced the rapid extension of the practice, so that the demand has fully kept pace with the supply.

As a system, drainage has been more practiced in some districts of New York, than in any other part of the country. It is not too much to say, that to Mr. John Johnson, of Seneca county, belongs the credit of having been the leading pioneer in this important enterprise.

The New York State Agricultural Society offered prizes last year, for the best communications on drainage, giving the result of actual practice. Two valuable papers were received—one by Mr. Johnson, which received the first prize, and the other by T. G. Yeomans, Esq., of Wayne county, which received the second prize. The papers will appear in the forthcoming volume of the Society's *Transactions*. In the meantime, we have been permitted to receive the articles in a separate form, and offer from them the following extracts, which we are sure will be perused with advantage by our readers. Mr. Johnson observes:—

“Having long esteemed a good system of drainage as important to good farming, and being well convinced that it would increase the profits on most farms, I have made tile drains on my farm in Seneca county, extending to full *sixteen miles* in length. The farm is situated on the rich clay ridge which extends from the Seneca river southerly to Tompkins county, a ridge of land devoted chiefly to the cultivation of wheat. I was, many years ago, satisfied of the necessity of removing in some economical way, the surplus water which saturated the soil, and too often interfered with the growth or maturity of the crop, not only wheat, but other grain and clover. My first efforts for more perfect drainage were made in 1835, when I imported a pattern of drain tile from Scotland, and caused them to be made in this neighborhood by hand labor. But it was not until 1839–40, that I felt encouraged by

success, as the labor and cost were too great to warrant extensive use; such tiles as were used by me, gave satisfactory evidence of their value. The important changes effected on my farm, were noticed by your present presiding officer, (John Delafield, Esq.,) and so thoroughly convinced him of the utility and necessity of drainage, that in 1848, he imported a machine to make drain tiles in this country. From that day, the expense or cost has been so reduced, that no excuse exists for wet fields, or grain being destroyed by freezing out. From that day, I have continued to construct drains as fast as my proper farm labor would permit, and present to you the results thus far obtained.

The question respecting the depth of drains, has always been one of interest and some uncertainty. On this point, I deem it absurd to propose any fixed rules, as the depth must depend upon the formation of the land, and nature of the soil. The rule adopted by me, is first to select a good outlet for the water, and then to dig a ditch so deep as to find a hard bottom on which to lay the tile; yet I have laid many tiles on clay, and they have done well. On my farm this is generally found at two and a half to three feet from the top, and I believe no drains ought to be less than two and a half feet in depth. The distance between the drains is regulated by the character of the soil; if it is open or porous, drains three or four rods apart may thoroughly drain it; while on more tenacious soils, two rods apart may be needed. In most cases, where my fields lie nearly level, it has been found necessary to construct the drains nearer to each other, adopting as a rule that the drains should always reach the point of the field where water is indicated to rise, and that is always at or near the highest part of the field, although that may only be observed when there is much water in the earth, and the springs full, or when the field is in wheat or clover; at such elevations, I put my drains deeper and nearer to each other, to make sure to keep the water under ground, using smaller tile leading to the main or sub-main drains.

“This rule has been important, for when opening ditches on the low grounds, the water has flowed with a force to induce most people to believe that it was derived

from springs close by, when probably the spring may be some sixty or eighty rods distant, at or near the most elevated part of the field, which when reached, may possibly save much expense in draining the lower lands. This shows the necessity of thoroughly examining the land to be drained in the wettest season. The main drains occupy the valley or lowest grounds, receiving the lateral drains and collected water.—They are constructed of larger tiles, *and discretion and care are very necessary to apportion the main drains to the quantity of water to be discharged.* In several instances, I have found it necessary to lay a double row of four-inch tiles, to carry off the quantity of water collected by the smaller tile.

"I have generally used the half-round, or horseshoe tile, as they are called. The four-inch tile are in most cases large enough for main drains, and they will discharge a body of water far greater than most persons would believe, unless they witnessed their action. There may be places where larger tiles are needed. In one instance I found it necessary to use six-inch tiles for sixty rods, and laid them in double rows. This would only be necessary where the thaws of early spring, or heavy summer rains are apt to collect large quantities of water on the surface. To prevent a wash of the surface in such places, I have at regular distances filled the ditch directly over the tiles with small stones for a length of from twelve to eighteen inches, the stones to rise a little above the surface, to prevent the covering of the stones by the plow; through these stones the surface water will pass rapidly down into the tiles, and be carried off at once. When the tiles are laid in the ditches with regularity and care, the earth is thrown in by a plow, having a double-tree nine and a half feet long, to enable the horse to go on either side of the ditch, which is a rapid and economical way of filling them. In regard to cost, I find that drains constructed of two-inch tile can be finished complete for thirty cents per rod; yet something must depend on the digging, whether the earth be hard or soft, and the distance to draw the tile. Mine have been drawn five miles, and I find that two-inch tile are large enough except for main and sub-drains. In my own case, I was obliged to feel my own way, and discover the best system, and best adapta-

tion to my lands; consequently the drains have cost me more than they would, if I were to construct them with my present experience."

It may be well to remark, that Mr. Johnson is no *fancy* farmer—he has made a handsome property by farming, under circumstances in many respects of an unfavorable character. The first question with him in every operation has always been—"Will it pay?" He never loses sight of this point, and in reference to it he says—"If I cut two crops of wheat from my drained land, I am paid by the excess of crop, so as to cover all cost of draining, and sometimes am more than paid by one crop—that is, by the excess of crop beyond what it would have been, had the land remained undrained."

Mr. Yeomans' remarks refer more to the advantages of drainage for fruit trees, and he has given many valuable facts derived from his own experience; but for want of space, we are under the necessity of deferring for the present, some extracts from his communication.—*Boston Cultivator.*

TEN REASONS FOR UNDER-DRAINING.

1. It prevents water which falls, from resting on or near the surface, and renders the soil dry enough to be worked or plowed at all times.

2. By rendering the soil porous or spongy, it takes in water without flooding in time of rain, and gives it off again gradually in time of drought.

3 By preventing adhesion, and assisting pulverization, it allows the roots to pass freely through all parts of the soil.

4. By facilitating the mixture of manure through the pulverized portions, it greatly increases its value and effect.

5. It allows water falling on the surface to pass downward, carrying with it any fertilizing substances, (as carbonic acid and ammonia,) until they are arrested by the absorption of the soil.

6. It abstracts in a similar manner the heat contained in falling rains, thus warming the soil,—the water discharged by the drain-mouths being many degrees colder than ordinary rains.

7. The increased porosity of the soil renders it a more perfect non-conductor of heat, and the roots of plants are less injured by freezing in winter.

8. The same cause admits the entrance of air, facilitating the decomposition of enriching portions of the soil.

9. By admitting early plowing, crops may be sown early, and an increased amount reaped in consequence.

10. It economizes labor, by allowing the work to go on at all times, without interruption from surplus water in spring, or from a hard baked soil in summer.

Albany Cultivator.

LANDSCAPE GARDENING.

HAVING practically, and with great pleasure and interest, followed the profession of cultivating the soil for twenty-eight years, in various localities, I have become fully convinced that the more judicious labor we bestow upon it, the more gratefully and bountifully will it yield to us in return, its beautiful and useful productions. It is true, that within these few years, more attention and care have been bestowed on cultivation; while investigation and science have been brought to bear upon various improvements, with more success than hitherto; still, in many localities, the management (if such it can be called) is deplorable. Practical suggestions may therefore prove acceptable.

The proper season is now approaching, when the laying out of new grounds, alterations of those already commenced, and the making of plantations and shrubberies, whether for ornament or otherwise, are to be effected with the greatest advantage for the future welfare of the trees and shrubs. I shall presume, therefore, that during the coming autumn and winter, certain improvements are to be carried into effect. I therefore beg to offer the following remarks, in order to further these operations, and to enable them to be conducted with more certainty, when in the hands of those whose experience may be limited. Improvements may consist in laying out a new place, or in making alterations in the arrangements of old grounds, such as altering the direction and form of roads and walks, and the making of new shrubberies and plantations, or

changes in those which already exist; the addition to, or contraction of the pleasure-grounds, the removal of trees and shrubs, and the alteration and re-arrangement of the Flower Garden. Varying the curve of a walk, removing or altering the shape of a flower-bed or clump of trees or shrubs, or any similar change, can only be an *improvement* when made in conformity *with taste*.

Perhaps some of your readers may inquire what is meant by taste? "All tastes are equally just and true, in as far as concerns the individual whose taste is in question; and what a man feels to be beautiful, is *beautiful to him*, whatever other people may think of it. It does not follow that all tastes are equally good and desirable, or that there is any difficulty in describing that which is really the best and the most to be envied. The only use of the faculty of taste is to afford an innocent delight, and to aid the cultivation of a finer morality; and that man will certainly have the most delight, from this faculty, who has the most numerous and the most powerful perceptions of beauty. . . . There is no one determinate proportion of uniformity and variety which invariably constitutes beauty. There are, in fact, as many varieties of beautiful compositions as there are varieties of character, and the beauty is constituted by the correspondence of the composition to the character. The vase, for example, may be either magnificent, elegant, simple, gay, or melancholy. In all these cases, the composition is different. A greater proportion

of uniformity distinguishes it, when destined to the expression of magnificence, simplicity or melancholy; and greater proportion of variety when the expression of elegance or gaiety is sought for. There is a propriety and a beauty in this difference of composition, according to the peculiar character which the form is destined to have." Such is Lord Jeffrey's definition of taste. Therefore, in the laying out and alteration of grounds, there is ample scope for variety within the wide boundary of acknowledged and consistent taste.

In many places, much improvement could be effected by giving the carriage roads and walks more easy and graceful curves, (and keeping them in better order.) Where walks from long use and frequent rolling, have become too low, and where the introduction of gravel to raise them is expensive, a great improvement may be made, (if the ground will admit of it) by cutting and rolling up the sod for one, two, or more yards from the side, and removing as much soil as will bring the sod, when replaced, not more than an inch and a half above the gravel. Few things are more insipid in garden scenery than perfectly straight walks and roads, unless when they assume character and dignity from contiguity to, and connection with the straight line of a house, veranda, greenhouse, avenue, etc. In forming a carriage road or walk, the great object is to make a means of communication between two different places; and the chief rule to be adhered to, where a straight line would not be desirable, is to render the curves graceful and easy, never introducing a bold, abrupt curve, unless there is a seen and felt reason for doing so, in the presence of an obstruction, either existing previously, or placed there by you, to convey that impression, and thus alone, in such circumstances, to call forth feelings of pleasure, and the percep-

tions of the beautiful, because associated with the stern demands of necessity.

We must have some standard to judge of the beauty and deformity of objects. If geometrical gardens are distinguished for undisturbed repose, those of an apparently irregular outline require something exciting. This effect can be produced by planting in clumps, trees and shrubs of different forms. There are in trees, as in everything else, some absolutely beautiful, others relatively so; some are adapted to make a figure of themselves, while others only appear to advantage in contrast, and are consequently best seen in mixed clumps. A definite purpose should characterize all that we do in pleasure-ground arrangements; whether it is limiting the growth of the tree or shrub to the size of the figure, or allowing it to extend beyond the regular line first marked out in picturesque scenery, it matters not. In planting clumps, we should select trees of different forms, choosing the round headed for definite turns, but taking care that irregular shaped ones are placed not in the center exactly, (though there occasionally they may be wanted,) but nearer the outside of the clump, and just by the regular trees, so as to contrast with the latter, and break up the monotony that would otherwise prevail. But this may be advantageously relieved by planting separate and peculiar trees near the clumps, so arranged as to mass with them in certain directions, but appearing distinct from them when viewed from other points, whence they may show to advantage by way of contrast.

With the increase of beautiful trees and shrubs in our nurseries, it is to be hoped that a corresponding interest will be felt by amateurs in acquiring a knowledge of their habits. Some persons who have already planted their grounds, have cause to regret their want of knowledge and experience,

and that they had not been wiser in time to avoid their errors. I have long been anxiously looking for Mr. Kelly's views on these subjects, in the promised continuation of an article on Trees, Shrubs, and Ornamental Planting, that appeared in the 6th number of the first volume, in which he belabors the poor landscape gardener who laid out the Spring Grove Cemetery. We must raise the standard of gardening by our own exertions, if it is to be equal to the times in which we live; it will not do for us to rest satisfied with the progress we have already made. A bolder and more enterprising spirit must distinguish us, and a far greater familiarity with each other's thoughts, as well as of the great world about us. It will not do for a man to be hugging in his bosom what he conceives to be hidden treasures. If Repton, Downing, and other authors, had kept their secrets thus locked up, in what position would landscape gardening now be? These men's thoughts are all links of the great chain that encircles the art, and by which we are able to set up some standard to judge of the beauty and deformity of objects. We must do good to get good; that is the motto.

If there is one subject of more importance than another, affecting the growth of trees and shrubs, it is *deep trenching*. For a series of years, in various localities, I have experimented on this subject, and have invariably found that the increased growth and beauty of the trees amply repays for the extra labor incurred. All unprejudiced minds will be convinced of this, if they will examine the generality of soils below the depth to which they have been usually cultivated. They will there find a pan, or hard crust, impervious to roots and moisture from either above or below; in dry weather this pan becomes so compact and hard that it can not be penetrated by the roots; a few

weeks of severe drought (witness last season) for the most part proves fatal to the trees. This pan, or indurated stratum, being so near the surface, prevents the natural moisture from rising upward; trenching husbandry bands the amount of water that falls on the earth, and prevents the soil from retaining more than is required by the species of plants cultivated; add to this the occasional stirring the surface when it becomes hardened, and destroying the weeds. These minutiae, though generally not attended to in the cultivation of trees and shrubs, are nevertheless of the greatest importance for the first two or three years after planting; these trifles, when carefully attended to, preserve the gases in the earth for the use of the plants.

I would advise that the ground intended to be planted as belts and clumps on pleasure-grounds, be immediately trenched not less than eighteen inches, if the soil will admit of it. Commence by taking out an opening across the ground intended to be trenched, to the depth required, and two feet in width, and remove this earth to the place where you intend finishing your trenching, so as to be in readiness for filling up the opening; then commence by casting the top spit into the bottom of the opening, and then dig out the bottom and throw it on the top of that, and so proceed with successive strips across the piece till the whole ground is finished. If the subsoil is bad, I would not advise it to be brought to the top, but dig it over rough in the bottom of the trench, and cast the top soil of the next trench upon it. Leave the ground thus till the planting season; before which time I will inform your readers as to what I think is the best method and time for planting, and suggest directions for the future management of the trees. I am, sir, yours,

RICH'D DAVIES, *Landscape Gardener*.
August, 1852.



The Vineyard.

VINEYARD CALENDAR FOR SEPTEMBER.

Cultivation.—Having kept the ground gently stirred during the past and previous months, it is probable, that with the dry weather which so often prevails during August, there will be little grass or weeds to contend against. If they make their appearance, however, it is still necessary to keep them under by shallow hoeing, or by using the cultivator with a short single-tree, to avoid injuring the vines—recollect that all summer cultivation should be shallow, having for its object simply the destruction of weeds. And how desirable it is to keep the ground neat and clean, will not be a question by any one of good taste, not to mention the advantage to the vines, to allow them to be the sole occupants of the soil. Some good farmers, when they give the vines their last cultivation, have adopted the plan of sowing turnips upon the ground. This is recommended as furnishing a partial crop of edible roots that grow while the vine is dormant, and providing a covering for the soil during the winter, and a green manure to be dug-in next spring.

Trimming and Tying.—It is generally the practice to shorten-in the branches during the summer, but some persons have been pursuing a different course, running into the other extreme, having observed, as they supposed, the injurious effect of too close

summer pruning. Now there is reason in this policy, which commends itself to the favorable consideration of all vine-dressers, who, being close observers of nature, begin to realize that there is really a *function* to be performed by the leaves of a plant beyond the mere ornament they provide, and they are also aware of the injuries that may happen to the first leaves, from hail, the ravages of insects and simple maturity; hence the policy of leaving more foliage upon the vines, to elaborate the sap for the growing crop.

There is a time, however, when it becomes advisable to pinch-in the ends even of the growing canes of wood that have been laid in for the next year's crop, supposing that *excess* of shoots and laterals have been broken-out during the season, as before advised. This period is early in September, or late in August, if that month have been as arid as usual. The object of this pinching-in is to ripen the wood and to keep it from blowing about.

At the same time the canes are to be tied to the stakes to keep them in their places. The vine-dresser will also observe the bearing shoots, that are bending down with the weight of fruit, and with his straw tie them up safely.

For the rest, this is the month in which

the promise of the growing crop, at least that which has escaped the ravages of the rot, may cheer the husbandman, as the beautiful clusters change from glaucous green to lovely purple, making the mouth water with bright anticipations of the gustatory gratification to be afforded by the luscious

berry. In many seasons the crop will be mature this month, and the busy time of the vintage will crowd us with its manifold labors; but as we are opposed to a too early vintage, the directions for this process shall be postponed for the present.

LETTER FROM THE SOUTH.

INJURY TO THE ISABELLA GRAPE.

DR. WARDER:—My first number of the *Review* reached me yesterday; and I am frank to confess that its attractive and artistic appearance, and the variety and excellence of its contents, very agreeably disappointed me. I think your magazine only needs notoriety to insure it an extensive circulation. A few copies of "Downing" and "Hovey" are in use here in the South; but as a general thing, their contents are not at all what is demanded by our warmer and drier seasons. I hope you will attend to our wants in this respect better than they have done, and, if possible, devote a portion of your paper to the instruction of Southern gardeners. By so doing, I can not see any good reason why you may not command a very large patronage here in the "sunny South." My own number of the Horticultural Review, I believe, was the first ever seen in this part of the country; and I do not doubt that, as it is, I could obtain a good many subscribers in our city and vicinity, if I only had an extra copy or two to show as specimens: mine I can't spare.—With more attention to Southern peculiarities of soil and climate, of course you would be proportionally more popular here.

But I sit down to state one of my many grievances to you, and to ask, either of you, or of some of your readers, a remedy therefor.

Our Isabella vines, two years old from

the cuttings last spring, have grown very luxuriantly, and this season set as much fruit as I ever saw upon vines of the same age. They were cut-down the first year to within two or three buds of the original stock. Last year they were not pruned so closely,—generally two or three of the strongest shoots being preserved, from four to six feet long. Since the first season of their growth they have not been manured: their only culture consisted in keeping the ground clear of weeds and grass about their roots. They were planted upon a slight bed, thrown up on a dry ridge of not very rich land, so that there has always been a descent from the plants upon either side.—They are trained horizontally upon high trellis-work, in a north and south direction.

Now for the *grievance*. About a month or six weeks ago, we noticed a great many black specks making their appearance upon the leaves and young shoots, and soon upon the fruit itself. These were very small at first, but gradually grew larger, until many of the leaves were almost entirely turned of a dark brown color. The shoots were so much affected as sometimes to break with their own weight, and the fruit turned of a dusky purple hue and fell off by bunches.

We thought it mildew, and resorted to pruning, thinning the fruit, applying sulphur, soapsuds, lime, etc.; but with very little, if any, benefit. Our spring had been

very warm and dry. As soon as a succession of showers set in, the disease began to abate, and now I find no new signs of its ravages. What must be done to prevent the like disaster next year?

Yours truly, H. A. SWASEY.
POPLAR HALL, MISS., July 17, 1852.

DR. J. A. WARDER :—

Dear Sir,—Perhaps you may deem some portion of the inclosed article on the "Rot in Grapes" worthy of publication in your valuable journal. The object is to invite a thorough investigation by practical vine-dressers, into the cause of this worst of evils in grape culture, and, if possible, to find out a remedy.

In the "Cultivator" of August 1st, which I send you, will be found an article on "Mildew in Grapes," which agrees in many points with the views suggested in mine. You may probably deem extracts from it interesting to some of your readers.

Very truly, your friend,

R. BUCHANAN.

The following article was read at the meeting of the Cincinnati Horticultural Society, on the 17th of July, and directed to be published.—*Cincinnati Gazette*.

THE ROT IN GRAPES.

From recent and careful investigation, I am inclined to believe that the "rot," so destructive to the Catawba Grape in our vineyards, has its origin in the same cause that produces the "mildew," and is in fact only that disease in another form.

In examinations with a magnifying glass, I have discovered a small cryptogamous plant, or fungus, growing on the stem that attaches the berry to the stem of the bunch in diseased specimens. This fungus, by obstructing the circulation of the sap, causes the berry to assume a dark mottled appearance, then to turn black, shrivel and fall off.

In some bunches all the berries are thus destroyed, in others about half, and in many but few.

Perhaps the "speck" or "spot" may be attributed to the same cause.

The "mildew," as we have generally known it, first appears about the time when the grapes attain the size of small peas, blighting occasionally the whole bunch, stem and all—but usually only the lower portion of it.

There is no mistaking the disease,—for it covers the part affected as if dusted with flour. In a few days the berry and stem turn black and crisp. When the grapes become larger, they appear to be better able to resist the influence of mildew, and the part least exposed to the light and air—the *stem of the berry*, is then affected, and the fruit finally destroyed by what is termed the "rot." The stem of the *bunch*, being by this time hard and strong, is not injured, and remains attached to the vine, while the berries fall off.

These diseases are supposed to be produced by sudden changes in the weather from hot to cold, or the reverse—from heavy fogs—from warm showers succeeded by a hot sun, with but little *electricity* to purify the air, or *wind* to drive away the noxious exhalations arising from the earth.

An excess of moisture about the roots of the vine in a stiff clay soil, retentive of moisture, may subject the plant to mildew—as also excessive manuring, rigid summer pruning, or deep plowing or hoeing of the vineyard in summer. Experience alone can prove whether any or all of these conjectures are right.

So much for cause and effect—now for the *remedy*. In volcanic countries, where the finest grapes are grown, we hear no complaint of mildew. *Perhaps* an application of ashes and sulphur to our vineyards, by supplying to our limestone land some of the properties of a volcanic soil, might, *to some extent*, prevent mildew and rot. I therefore recommend as an experiment, on a part of the vineyard, a light top dressing of ashes in the spring, before hoeing; and to scatter flour of sulphur over the ground, and a part on the vines, the last week in May or the first in June, and again about the first week in July. These applications may possibly prevent mildew to some extent—they can certainly do no harm. Sulphur is freely used in vine-houses to destroy mildew on foreign grapes, and ashes are strongly recommended by one of our most intelligent cultivators—Dr. L. Rehfuß—as a means of

supplying to the soil the *alkalies* drawn from it by the grape.

I have tried sulphur on one square of my own vineyard this season, with good effect, although it was not applied at the proper time.

I would also recommend to avoid stirring the ground after the first hoeing in April or May, to omit high manuring, and to avoid too rigid summer pruning, as all or either may, perhaps, cause injury to the crop of fruit.

I make these suggestions with diffidence, being aware that I am addressing vine-dressers of more experience than myself; but I respectfully refer such to my own vineyard for an example of the practical results of my recommendations to others.

In the culture of our native grapes we have much to learn, and it is only by careful and judicious experiments that we shall attain the right knowledge at last.

R. BUCHANAN.

CINCINNATI, July 17, 1852.

New Remedy for Mildew on Grapes.

I AM glad to present the modest suggestions of so good an observer, and so practical a vine-dresser, upon a subject of great importance to the vine interests of our country. Suggestions from such persons are always to be highly valued, and should not be ranked with baseless theories so often palmed upon the agriculturist as *science*, which brother editor W. S. King, of the Journal of Agriculture, has so well defined to be *knowledge systematized*. Still I am not prepared to admit the identity of the two diseases *mildew* and *the rot*. Upon the application of ashes, all are agreed that it will be appropriate, and highly useful to the vines. Sulphur is a well known antidote for the mildew in vineries, and other plant-houses, but it has always appeared to be a very crude method, this application in substance. The suggestion of Mr. Grison, head gardener at Versailles, appears to recommend itself to the favorable notice of our gardeners, who are so frequently obliged to apply sulphur as a remedy for the mildew.

The following extracts are taken from the article in the Ohio Cultivator above referred to.

This disease has of late years so generally destroyed the fruit, after the first or second year, that few persons now think of planting foreign grapes, except in houses constructed for their culture; and even in these much care is often requisite to guard against this evil.

The mildew is by no means confined to our own country. It often does more or less mischief in England, and also in France; and we notice that much investigation has of late been bestowed upon the subject of the nature, cause, and remedy of the evil in both those countries.

Mildew is admitted to be a minute vegetable (*fungus*), of which very many distinct species have been figured and described—almost every kind of fruit having its own peculiar species; and some, as the grape, being liable to the attacks of several species, but all of them bearing enough resemblance to each other to warrant the belief that they may be attributed to the same general causes, and removed by the same remedies. The *Gardener's Chronicle*, of June 26th, 1852, says:—

“In all directions BLIGHT is making havoc; that is to say, the fungi which produce the appearances popularly known by the name of blight, are showing themselves in great force. Beans are so attacked by *Uredo Fabæ*, that farmers are plowing them up; wheat is withering under the joint or separate infliction of *Uredos Rubigo* and *Segetum*; *Æcidium cancellatum* is ravaging Thorns and Pear-trees; *Oidium Tuckeri* is smothering Grape-vines; *Erisiphæ* are overrunning the Pea crops; and as a matter of course, our old enemy *Botrytis* is once more a visitor to the Potato grounds of Sussex.

“The seeds of mildew or blight fungi appear to exist everywhere,—dispersed through the air, and lying in the soil. Drawn into the system of a plant with the water absorbed by the roots, or possibly through the pores of the leaves, they are ready to grow wherever they find themselves in presence of matter on which they can feed, and in circumstances favorable to their development. Hence, they appear every year in some degree, particular species infesting particular kinds of plants, just

as each animal is preyed upon by vermin peculiar to it.

“Grison’s method for the prevention and cure of this disease appears to merit particular attention. Horticulturists having so frequently obtained only negative results from the different modes of treating vines attacked by the (fungi) *Oidium Tuckeri*, in the past season, M. Grison was induced to employ a very simple method against this troublesome disease.

“M. Grison’s peculiar method consists in syringing the vines with hydrosulphate of lime. In order to obtain this liquid, M. Grison employs 1 lb. of flowers of sulphur and an equal quantity by measure, of fresh-slaked lime. When these substances are intimately mixed, they are put into an iron or glazed earthenware pot containing five pints of water; the mixture is made to boil for ten minutes, and kept stirred all the time. The pot is then taken off the fire, and the mixture allowed to settle; when it is has done so, about four pints of the clear liquid is bottled for use.

“This liquid is not, however, directly applied to the vines. Before using it, 100 parts of water are added to 1 part of the liquid, (or in other terms, each pint of the liquid is mixed with $12\frac{1}{2}$ gallons of water.) This diluted, M. Grison has ascertained that 1 litre of hydrosulphate will be sufficient for 100 superficial metres of wall. This is at the rate of one pint for 68 square yards; or 51 feet along a wall 12 feet high.

“The inventor of this very simple mode applied the liquid at three different periods; but he thinks that one syringing before the vines are in flower, and another when the grapes are formed, will be sufficient, and that a third syringing may be dispensed with, unless the *Oidium* should re-appear. But a vigilant inspection of the vines is necessary; for it is well proved by experience, that the mildew is much easier destroyed in the commencement of the attack, than it is after it has overrun the whole plant.

“When we compare the facility with which the above remedy is applied, with the inconveniences which attend the use of dry flowers of sulphur, we must certainly give the preference to the former. We know that before the dry sulphur is scattered on the vine, it is necessary to moisten the foliage; and that frequent repetitions of the operation are

required. We know likewise, that these powderings injure the beauty and quality of the grapes; whereas the vines treated last year by M. Grison, according to the method above detailed, had a vigorous growth, and produced large bunches, and very fine berries.”

Signs of the Ripeness of Grapes.

To produce a good wine, it is most important to know the external signs the grapes will have when perfectly ripe,—each wine-grower should be well acquainted with them. But still a great many, even knowing these signs, will gather their grapes before full maturity, for the sake of gaining more wine—their principle is quantity, not quality! The signs are—

1. The stem of the grape should be of a brown color.
2. The cuticle of the berry must be clear and transparent.
3. The berries should separate easily from the stems.
4. The seed must be of brown color.
5. The juice must be sweet and sticky.

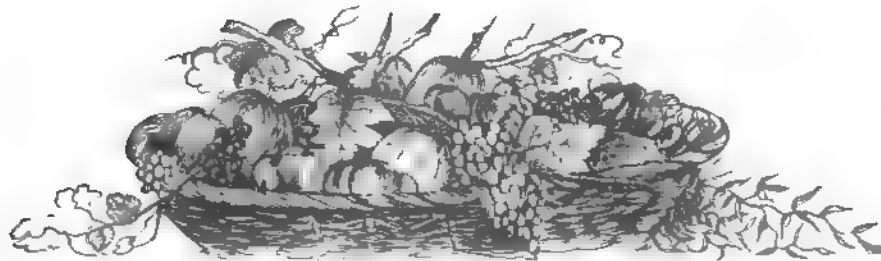
Do not cut the grapes early in the morning with the dew on, nor during rainy weather, nor shortly after a rain.

Pick out the berries stung by wasps, or other insects, as these commonly have a putrid and sour taste. The unripe or green berries should also be carefully removed.

The precise time of perfect ripeness can only be discovered by a chemical analysis, when the relative quantity of sugar and acids can easily be determined. The change of gum, dextrine, and acids into sugar can daily be ascertained; and a suspension of transformation, or a consequent retrograde action, would show the real time of perfect maturity.

L. REHFUSS.

When shall we have these critical and continuous analyses, so often urged, and which will undoubtedly prove of so great value.—ED.



Pomology.

POMOLOGICAL MEMORANDA.

My friend KENNICOTT, of Illinois, who has, and deserves to have, free access to the valuable gatherings and mature thoughts of the venerable patriarch in horticulture, David Thomas, (with whom the reader has already become acquainted,) has laid us under renewed obligations, by furnishing for publication the following extracts from his *Note-Book*. They are of a character which denotes their origin, and which will, for their soundness, entitle them to profound attention—even though some of the positions assumed may perhaps bear a little criticism; this is a task, however, not to be lightly assumed.

The horticulturist, though sometimes shut out from his garden by ungenial seasons, and deprived of the beauty and fragrance of flowers, may find other comforts, scarcely less interesting, in well stored fruit cellars.

I regret to say, however, that my chief dependence in this line, is on the *apple*. I have cultivated one hundred kinds of pears; not that I wanted a quarter of the number, but I wanted to find out the best—"the very best of all,"—as Dean Swift said in reference to some other things. Yet my efforts have led to disappointment, and chiefly on account of the *fire-blight*. For more than twenty years, this malady was very little

known among my trees; but near the close of spring, in 1845, there came a severe frost after they were in full leaf, followed the next night by another; and the following notes which were made while it was fresh in my memory, describe the appearance of things at that time:—

The severe frost on the morning of the 30th, produced ten times more *fire-blight* than I ever saw before. It was not confined to the *pear* trees, though these suffered most—for the *apple* trees, and the *quince* trees shared largely in the calamity; and even the *cherry* tree, which was not on the list of such as were susceptible of this malady, did not escape.

This visitation has furnished the clearest proof that *fire-blight* is not always the work of insects. No trace of it had been discovered of late years in this neighborhood; and then it fell on us like a shower—not slowly increasing, as if insects were extending their colony. On a branch of *Beurré Sutin*, most of the fruit perished immediately; and in a day or two, a part of the leaves and twigs gradually assumed the usual appearance of *fire-blight*. It was not the most thrifty shoots, however, that suffered the most; but stunted twigs of a finger's length, were killed down to the main branch.

The irregular manner in which this malady appeared, destroying only a twig or two on some trees, and a dozen or more under the same temperature,—might induce superficial observers to believe it the work of insects; but plants that insects never attack, presented similar irregularities. Two fine shrubs of the *broad leaved Laurel*, had shoots about three inches long of that year's growth,—part were killed, and part not damaged in the least; and though it may be difficult to explain such phenomena on any known principles, yet the facts are incontestible.

I may also mention, as explanatory of our long exemption from *fire-blight*, that we had had no frost as severe as *that*, and as late in the season, since the year 1817.

But that frost of 1845 has not been all that we have endured. Every spring since, except the present—that is to say, in 1846, '47, and '48, we have had *severe frosts after the trees were in full leaf*, affecting the *apple* trees as well as the *pear* trees; but with this difference—the frozen juices of the *apple* appear neither to ferment like the *pear*, nor becoming poisonous, to enter the circulation. The whole damage to the *apple* tree therefore, seems to be done at once; while the *pear* tree may linger on, year after year, and losing one branch after another, should it not die entirely, become a worthless and unsightly object. I have had to cut down several of my largest and finest *pear* trees, from this cause. I have tried to prevent this last resort, by cutting off the branches as the disease advanced, but to no useful purpose. Among those that have suffered the most, are the *Madeleine*, *Stevens' Genessee*, and the *Brown Beurré*; and among those that have suffered the least, are the *Virgalieu* and *Seckel*. On one tree, occupied by the *Seckel* on the east side, and the *Urbaneste* on the west,—the former has not

even a diseased twig, while the latter will hardly survive.

We ought not from these facts, however, to conclude that the *Seckel* will always be exempt, and *Stevens' Genessee* always a sufferer,—for the reverse in some places has been recorded. I can only say, that all my four trees of the *Seckel* have proved hardy; and that all my trees of the *Madeleine* and *Stevens' Genessee*, seven or eight in number, have proved tender, some of them dying outright the first season after they were struck.

I believe there is no fruit so much affected by slight differences of soil and climate, as the *pear*; for kinds which are excellent in some places and in some seasons, are utterly worthless in others. About seven years ago, I took specimens of the *Wurtemberg* to our county fair at Auburn, and all who tasted, pronounced them very superior. I have never eaten a good pear from that tree since. Among those of the most permanent character—that is, such as have always been good in my grounds—is the *Summer Bon Chrétien*, known as the *September pear* in this district; and yet more than a year ago, greatly to my surprise, I tasted one at Auburn, from a tree that I had furnished, which was unfit for human lips. Some ingredient essential to fine flavor was left out. In the past season, however, it bore fine fruit, and without any change of condition that has come to my knowledge.

On a former occasion, I mentioned that the *St. Ghislain* and *Stevens' Genessee* were insipid, in consequence of the trees standing in uncultivated ground,—for when it was reduced to a fine tilth, the fruit became excellent. Other fruits, however, are improved by good culture; and one of the most singular cases that has come under my notice, was that of the *Belle de Choisy* cherry, which I reported last fall at Buffalo, and which

appeared to be nearly as much affected as the pears.

It is a curious circumstance, that some pears, if left on the tree to ripen, rot at the core, and become worthless, as the *Jargonelle*; while others do best if left untouched, as the *Summer Bon Chrétien*. The rule, therefore, which some have laid down—that all early pears are better if ripened in the house—is subject to exceptions. The *Bartlett*, however, is described as possessing the property of maturing perfectly in the house, even if picked before it is fully grown; and there may be others; but pears differ so much in their properties, that close observation and some experience are necessary before we can learn the best management.

Varieties of the pear also differ very much in another particular. Some bear best when standing on *quince stocks*—others do best on *pear stocks*—some do well on either—while the finest *Summer Bon Chrétiens* that have grown with me, stood on *apple stocks*. I would not be understood, however, as recommending this experiment for general practice,—for at the junction of the stock and graft, the latter has swelled into a great bulb, indicating a very imperfect union between them; and if it were not protected by the other branches of the tree, would be greatly endangered by high winds. Neither am I certain that it would be any safer, if the graft had been set near the ground, instead of six feet above it. The cause of this superiority in the fruit is explained by supposing some obstruction to the descent of the juices at this point; and consequently that an accumulation takes place, and swells the fruit to a larger size.

In regard to winter pears—from my own experience I have not much to say in their favor; and yet I am not much discouraged. This district, indeed, may be inferior to the

lands “*down east*,” for the production of pears in general; but nothing can exceed the excellence of some kinds with us—the *Seckel* and *Virgalieu* for example.

Much depends on the manner of keeping winter pears; and Samuel Walker, of Roxbury, has given the following illustration:—

“Let us compare,” he says, “the *Chau-montelle* and the *Vicar of Winkfield*. The first will ripen when subjected to great changes and exposure to frost; indeed it may be left on the ground with only a slight covering of leaves or grass, at times covered with snow, the thermometer varying from 10° above zero to summer heat. If the first is taken into a cold cellar for a few days—or, if frozen, put into some soil to take out the frost, and then placed in the ripening department, the fruit will acquire its highest state of perfection. On the contrary,” he continues, “the *Vicar of Winkfield* belongs to a class of pears requiring a very different course of treatment. This variety should be never exposed to frost; and whenever the fruit is wanted, should be placed in the warmest part of the ripening room. In this manner, it will be ripe in fifteen or twenty days;” that is, I presume if the season of its ripening has approached, and not otherwise.

It may be safely stated that winter pears very rarely keep as well as winter apples. I have found them very liable to rot. A late writer says, “They should be wrapped separately in paper, packed in kegs, barrels, or small boxes, and placed in a dry, cool room, free from frost.” Now fruit that requires all this care, ought to be very fine; and it was therefore with much pleasure that I read M. P. Wilder’s remark, that the *Beurré d’Aremberg* “keeps as well as a Russet apple, and requires no further care than to gather in a dry day, and pack at once from the air in close boxes or barrels; and

that at maturity it retains all the freshness of a specimen just plucked from the tree." My grafts, however, have not yet fruited; and I can not speak of its quality from experience, though it is represented as a first rate table pear.

Have I ever eaten a winter pear that was equal to the best summer or autumn pears? No; I have not, unless it was a single specimen of *Passe Colmar*—a sort not well adapted to general cultivation. With me, the *Winter Nelis*, though very good, is not equal to the *Summer Bon Chrétien*, the *Seckel*, or the *Virgalieu*.

In selecting late varieties of the pear, it is of some consequence to choose fruit that adheres well to the branches, so as not to be blown off by the high winds of autumn. A few years ago, a kind friend at Flushing sent me cuttings of the *Columbian Virgalieu*, which soon came into bearing; but they *let go* so readily that I lose most of the crop. On the contrary, the *Beurré d'Arenberg* is represented as holding on with great tenacity.

Among pomologists, and especially nursery men, an evil had been gradually increasing in magnitude, till common sense required an abatement—I mean the great number of *varieties* that crowd their grounds,—fine, indifferent, and worthless. Many persons appeared to think, the more the better.—This rule will hold good in a botanic garden, where all the *species*, of every *genus*, are wanted to exhibit a full view of the vegetable system; but *varieties*, unless distinguished by some peculiar beauty, or excellence, are unworthy of notice, and in a nursery deserve to be classed with its weeds.

In short, we have too many sorts; and though most of them are *good*, yet it is doubtful if we ought even to eat good fruit while we can get better. So, not to mention some private efforts at reduction,—more than two years ago, a committee of

the State Agricultural Society recommended *only thirty kinds of apples*, instead of the *hundreds* that crowd the nurseries, and the pages of nursery catalogues; and following up this example, no less than four Pomological Conventions have since been held, partly with a similar object in view—that is to say, two in Ohio, one at Buffalo, and one at New York. I ought to state perhaps, that in three of these conventions, the direct and ostensible object was not to fix on any definite number of kinds to be cultivated, but to compare the ripened specimens before them; to show that some of different names were identical, while some bearing the same name were different; and to take testimony for and against the same kinds in different parts of the country. All these examinations, however, tend to lessen the number of kinds, or of names. If there be spurious Spitzenburghs for instance, (and I have seen such,) when the genuine is known, the counterfeit is expunged. On the reverse, when different names indicate the same fruit, to know this fact is worth money to the purchaser, and the saving of much labor besides.

At the Pomological Convention held in New York however, a distinguished pomologist, famous for his large collection, introduced a resolution that one hundred sorts of *apples*, one hundred sorts of *pears*, and fifty sorts of *peaches*, were enough. This was slashing with a bold hand; but the Convention far outdid him, and only recommended *ten* kinds of *apples*, *ten* kinds of *pears*, and *nine* kinds of *peaches*, for general cultivation; to which *three* kinds of *apples*, *two* of *pears*, and *one* kind of *peach*, were added for particular localities.

In recurring to my own experience in collecting fruits that have been recommended, I should say that not one in ten, and I believe not one in twenty, have proved to be *first-rate*, or such as it is really desirable to

have, in addition to our common best kinds. Although it is a great pleasure to see new and excellent fruits ripening on the branches of an old tree, yet it is a considerable drawback to have—not exactly ten blanks to a prize, but ten prizes so small as to differ very little from blanks; in other words, if not exactly a dead loss, a very poor speculation.

But some may inquire how does all this happen? It happens, not because our friends or correspondents would recommend bad or indifferent fruit, but partly because some kinds succeed well in one district, and fail in another,—like the *Ribston Pippin*, which is admired in Canada West, and cast out as worthless on Long Island,—partly because the tastes of our boyhood have hallowed inferior sorts, and partly because some cultivators of fruit are not good judges of the article. To be a perfect judge, it is necessary to be familiar with the very best kinds. In no other way can we mature our tastes. As finer varieties emerge into light, and as long as there is room for still further perfection, so long will the old kinds, if inferior, continue to be rejected.

Within a very few years, the commerce of this district has developed a new feature—I mean the packing of winter apples for transportation; and from this source many farmers find their revenue considerably increased. A few years ago, when the temperance reformation set in, many landed proprietors, not knowing what to do with their surplus apples, cut down part of their orchards; but the turn of the tide—or rather a new one—is stimulating them to plant new orchards, and to cover more acres in this way, than were ever planted before. Now to the man who is bent on setting out a new orchard, I have a few words to say, if he has an ear to listen. There is scarcely an acre to be found within miles of this place,

that would not form an excellent site for this purpose. By properly preparing the ground beforehand, however, the growth of the trees may be doubled, and consequently the whole brought into full bearing, in one-half of the usual time. This may be done by *trench-plowing*, or by *subsoiling*, which perhaps is still cheaper; and if this difference is not fully understood, I will explain:—To *trench-plow* is to bury the soil by turning the subsoil over it,—while on the other hand, to *subsoil* is to stir and loosen the subsoil by means of a deep dipping coulter, but not to turn it over the soil. Both methods allow the surplus water to drain away from the roots, and prevent stagnation; but at the same time, such deep beds of mellow earth retain much moisture, which is then ready to rise by elective attraction from below in dry weather to supply the wants of vegetation, like a perpetual fountain.

The advantages of transplanting trees of a large size, have been generally overrated, because few persons are prepared and willing to encounter the extra trouble that is necessary to preserve these advantages.—This consists of greater care in taking up, so that the roots may not be mutilated—in digging larger and deeper holes to set them in, and in driving stronger and taller stakes to support them,—for without these essentials, it is far better to procure smaller trees.

In regard to the kinds—the property of *long-keeping* is of great importance, and in the market may outweigh even superior flavor. The trader can always get a price for sound fruit. The advantages claimed for the *Northern Spy*, however, are both *soundness* and *fine flavor*; but nearly the same words may be used respecting its *fairness*, that were once used on another occasion:

“The good are very good, the bad
Scarce fit to feed the pigs.”

I have a very thrifty tree of this variety, and yet a part of the fruit is worthless. It seems incapable of maturing the whole crop, even when it is not overloaded. I have no other kind of apple that under similar circumstances would have produced so many defective ones. The remark of P. Barry, in the Buffalo convention, is worth remembering: "The *Rhode Island Greening*, and the *Roabury Russet*, would thrive where the *Northern Spy* could not be grown at all." Those who conclude to plant it, therefore, ought to be fully resolved to cultivate it in the best manner. The fruit has borne a high price.

The *Newtown Pippin* is another apple of great value, which requires higher cultivation than our ordinary kinds. *Scraggy* is a word that may be applied to the young trees; and on account of their irregular growth, they are no great favorites with nursery-men. Good manuring, deep tillage, scouring the bark with lye or soap, white-washing, and careful pruning, will go very far, however, toward overcoming its natural defects. Under favorable circumstances, my trees have produced some very fine specimens; but in a neglected orchard, it is easier to raise five bushels of the *Swaar* or *Spitzenburgh* than one of the *Newtown Pippins*,—so many are defective, blotched and unsightly. The indolent, or the negligent, ought not seriously to think of growing them.

There is yet another apple of high character which can not be had in perfection, without some extra care—I mean the *Bell-flower*, a fruit unsurpassed in flavor. Many of them, however, are deficient in shape and comeliness; and the best remedy that I know is careful pruning—not allowing the nutriment to be divided into too many parcels. Deficiency of number would be compensated by magnitude; and as spheres are

to each other as the cubes of their diameter, I know not why apples of the same shape are not to each other in the same proportion; that is, if we double the diameter, we octuple the magnitude—in other words, that *one* large apple contains as much as *eight* small ones of only half the diameter. The flavor of well grown specimens, you know, is generally finer.

With two other apples, I have lately become better acquainted. The *Broadwell* was fine about midwinter, and has much resemblance to the *Large Yellow Bough*, which ripens in harvest. Indeed, if the latter could be properly preserved till midwinter, we might be puzzled to distinguish them. The grafts were sent to me from Ohio.

The late Judge Buel did much to introduce the *Jonathan* apple, and to his liberality I owe my knowledge of this fruit. The spring is its season of maturity; and as a keeper, it is equal to any in my collection. I esteem it very highly.

Peeling the Bark from Cherry-Trees.

It is an old adage, that "nothing is made in vain," and it is generally admitted that it is founded in truth. It seems, however, that it is not so in everything, for Professor Turner, of Illinois, states that it is only by *peeling off* (!) the bark of his cherries that he is enabled to save his trees. We know there are instances where life can only be saved by amputating a limb; but that the bark of the cherry should be peeled off as a general rule, we consider one of the most wild notions that a sane cultivator could conceive. We see no reason why other trees would not thrive without their bark just as well. Indeed, so elated was the professor with his experiment with his cherries, that he intended this year to *rasp* the bark off of his *pear-trees*, (!) with the expectation that it will add to their vigor. We should be glad to learn the result of the experiment.

Professor Turner is certainly zealous in the cause of Horticulture, and as observation, experiment and practice can only make

a successful cultivator, some valuable information may be the result of his zeal. His mode of destroying the curculio, is to bore a hole in the stem of a tree, fill it with sulphur, plug up and seal with wax.(!) He now proposes to get rid of the pear blight, which he has ascertained is caused by an insect, by boring similar holes, and filling with quicksilver.(!)

We certainly must be thankful for the pleasure we have derived from our gardening labors. Beyond the ordinary vicissitudes of climate and the attacks of insects, we have nothing to complain of. We have neither used gas, tar-coal ashes, tan, iron filings, blacksmiths' cinders, copperas, lime, sulphur, soot, peat, or other nostrums, upon or around our trees, and find them only to be too vigorous. If we had experienced the ills which Professor Turner seems really to groan under, judging from his articles in the *Horticulturist*, we should quit our garden and take refuge in some place where there would be no vestige of vegetation to remind us that trees and plants were only given to man to—murder with bad treatment.

New Pears.

Selected from Mr. Rivers' Catalogue :

Albertine.—Large size, handsome, melting, very hardy ; first quality. Succeeds as a pyramid on the quince. End of August.

Alexandre Bivort.—Medium size ; a new hardy pear from the collection of the late M. Esperin. Flavor sugary, perfumed and exquisite ; it literally melts in the mouth. Forms a fine pyramid on the quince. January.

Alexandre Lambre.—Medium size ; a new hardy pear from the collection of the late Van Mons. Melting and excellent. Forms a prolific pyramid on the quince. December, and often to the end of March.

Baronne de Mello.—Medium size ; a very good melting pear, equal to Brown Beurré, and quite hardy. Succeeds well on the quince, and forms a handsome pyramid. October.

Bergamotte Drouet.—Medium size ; a new late pear, which succeeds well on the quince and forms a fine pyramid, as its shoots are stout and fastigate. April and May.

Bergamotte Dussart, (Van Mons.)—Medium size ; a melting and hardy winter pear,

which succeeds on the quince and forms a prolific pyramid, but deserves a wall. April and May.

Beurré Benner.—Small size ; a new hardy, late, melting pear, from the collection of the late Van Mons. February.

Buerré Bretonneau, (Esperin.)—Large size, a new late pear of high excellence ; nearly or quite melting ; succeeds on the quince double worked, and forms a prolific pyramid, but deserves a wall in the north. May and June.

Beurré Duhaume.—Large size ; a new and excellent pear, melting and rich ; succeeds on the quince double worked. February.

Beurré Hammecher.—Large size ; a new hardy pear from Belgium, melting and excellent. Succeeds well as a pyramid on the quince. October.

Beurré Leon le Clerc.—Large size ; a new large, melting pear. November.

Beurré Navez, (Van Mons.)—A new pear, described by Van Mons as "not a pear, but a skin filled with juice the most vinous and sugary it is possible to conceive." September.

Beurré Tuerlinckx.—Large size, or rather much beyond it, for it is an enormous pear, and though not first-rate, yet is useful, as it is eatable nearly all winter. It is quite hardy, and succeeds on the quince. December to February.

Beurré Wetteren.—Large size ; a new and very hardy pear, from the collection of the late M. Esperin ; melting and excellent. First quality. February.

Beurré Winter, (Rivers'.)—Large size ; a new pear, raised here from the Easter Beurré ; a rich, vinous, melting pear, very hardy, and succeeds on the quince double worked. February to March.

Blanc Per Né.—Large size ; a new melting pear, said to keep till May.

Bon Gustave, (Esperin.)—Large size ; a new melting pear, hardy, and succeeds well on the quince as a pyramid. December.

Colmar Artoisonet.—Large size ; a very large, handsome pear, like Beurré Diel, but quite different in flavor. November.

Dr. Bouvier.—A large and good hardy, melting pear. Tree inclined to be thorny ; succeeds well on the quince double worked. February.

Dr. Capron, (Van Mons.)—Medium size,

melting and hardy. In shape, like a Glout Morceau. November.

Duc de Nemours.—Medium size; a new hardy, melting pear, which succeeds on the quince. December.

Grand Soliel, (Esperin.)—Large size; a new half melting, late pear, which succeeds well on the quince, requiring a warm soil and situation. December to March.

Lauré de Glymes.—Large size; a new hardy, melting pear, from the collection of the late Van Mons; succeeds well on the quince. October.

Maréchal de Cour, (Van Mons.)—Large size; a new and fine pear. It was the expressed opinion of Van Mons, that "this was the best pear he ever raised." November.

Melon de Namur.—Large size; a very fine and handsome pear, exceedingly juicy and agreeable; succeeds on the quince, and

bears well as a pyramid. August and September.

Poiré Pêche, (Esperin.)—Large size; an excellent melting, new autumn pear; said to have the flavor of the peach. Succeeds on the quince double worked. October.

Pius IX.—Large size; a new hardy pear from the collection of Van Mons; melting, sugary, and highly perfumed without being musky. End of September.

Prevost.—Medium size; another new hardy pear from the collection of Van Mons. Melting, sugary, and highly perfumed. December to March.

Zepherin Gregorie.—Medium size; a new hardy, late, melting pear. March.

With a few exceptions, Mr. Rivers puts them all down as *first quality*. Many of them will fruit in our collection the present year, and afford an opportunity to test their merits.

Hovey's Magazine.

NOTES ON STRAWBERRIES.

THE culture of this fruit is every year attracting more attention; around Rochester it is assuming considerable importance; several large market plantations are already pouring in their abundance. The prospect is that Rochester will be soon, if not already, the best supplied with this delicious fruit of any town in the United States. We are quite confident that *now*, in point of quality, the strawberries of the Rochester markets compare favorably with those of other places; but there is yet great room for improvement. Our growers generally take good care of their plantations the first or second year, and produce splendid crops; by the third and afterward, the beds get old, the ground all covered, and the fruit runs down to the miserable *market* size. But purchasers are learning to buy and eat, as we learn to cultivate; they are becoming more difficult to please and more discriminating in their prices, so that by and by cultivators will discover that it will not pay to be slovenly.

Cincinnati has almost a "world wide" strawberry fame. Her cultivators have penetrated so deeply into its interesting philosophy, that the most learned among the modern Athenians, with all their pomological wisdom, can not get along without an occasional lecture from them. They have been

pioneers in the extensive culture of the strawberry, and have promulgated, in the face of stern opposition, some wholesome truths in regard to "stamens and pistils," now very generally carried into practice. But, judging from samples sent this way the present season, and reports from eye-witnesses, their strawberries are far behind those of Rochester, in point of size and beauty at least. We have been looking over the report of the fruit committee on their exhibition of the 3d and 4th of June last, and find that McAvoy's Superior, that last year received Mr. Longworth's premium of \$100, has been again awarded the first premium as the best variety exhibited. Schneicke's Pistillate is highly spoken of, and many new promising varieties are announced.

The display made by the Genessee Valley Horticultural Society on the 25th and 26th of June last, has perhaps never been surpassed, if equaled, in this country. R. G. PARDEE, Esq., of Palmyra, exhibited about forty varieties; several others, from twelve to twenty varieties each. From among these, the fruit committee, consisting of practical cultivators and critical judges, awarded both the first and second premiums to Burr's New Pine, "placing flavor and productiveness before size."

This would seem to answer the question, What is the best strawberry grown around Rochester? For several years—indeed, ever since its introduction—the Burr's New Pine has been acknowledged to be one of the finest flavored fruits that has been grown or exhibited here. No fruit ever acquired such a popularity in so short a time. But it is worthy of it. The plant is hardy and productive; the fruit large, handsome and good. The fruit committee of the Albany and Rensselaer Horticultural Society awarded to it the first premium both last year and this. The report this year reads thus:

"For the best and finest flavored variety, to JOEL RATHBONE, for Burr's New Pine—beautiful specimens—\$2.

"For the second best and second finest flavored variety, to C. P. WILLIAMS, for Hovey's Seedling—very large and beautiful specimens—\$1.

"The committee, in awarding this premium, wish to remark, that notwithstanding they think the flavor of Burr's New Pine more delicate and delicious than that of any other variety exhibited, still it is not considered by them as beautiful, as hardy, or as prolific as Hovey's Seedling, and consequently not so desirable for cultivation on a large scale."

At Rochester the New Pine is generally considered more productive than Hovey's. We have not seen a crop that would form an exception to this.

The Large Early Scarlet is another that stands well with the growers here; it never disappoints. Our committee report it "early, productive, and a valuable fertilizer." We have never known it to fail to yield a good crop, and it is patient under bad treatment—doing well where others would die. If we were to be confined to one variety, we should venture to choose this.

Hovey's Seedling is popular here and everywhere, on account of its great size and beauty. In size especially it surpasses all others except the British Queen, but it is by no means a great bearer in the gardens of this part of the country, whatever it may be elsewhere. It is more variable in this respect, too, than many others. This season the crop here has not been so good as usual. We went some twenty-five miles almost on purpose to see a bed of this variety from which great things were expected, but we found it a total failure. We saw a large plantation of the most luxuriant plants, rejoicing in the most generous treatment, but not a perfect berry was to be seen. The cultivator is renowned in the art of producing wondrously large strawberries, but this

time he made a sad failure. He is said to belong to the "old school," and is therefore an unbeliever in "stamens and pistils"—the necessity of providing a fertilizer. This must be the cause of his failure; and it has probably cured him of his unbelief, for we saw where fresh rows of staminate flowered plants had been not long planted near the Hovey's. We think if he had planted his fertilizers at the proper time, he would have had really a model strawberry bed.

The Boston Pine (Hovey's) is falling in estimation here. It is a prolific, good variety, but needs good soil and first-rate cultivation. When the plant grows old, and the ground nearly covered with runners, it is worthless. But it is worth good culture; and its falling off is more the fault of our cultivators than of the plant. It requires to be kept in "hills," and free from runners, and in rich soil.

Burr's Rival Hudson is valued here as being very productive, and particularly good for preserving. Burr's Ohio Mammoth is a very large and productive variety, light colored like the New Pine, but of rather indifferent flavor. Iowa—medium size, a great bearer, and of medium flavor; plant hardy and vigorous. This is used by some as a fertilizer, and answers well for this purpose; but for this region we prefer the Large Early Scarlet. Lizzie Randolph is a large, handsome berry; plants vigorous, and bear well; but, as far as we have seen, of poor flavor and quality. Black Prince generally bears an excellent crop with us. Many admire its peculiar, rich, mahogany color. The flavor this season, when fully ripe, was fine. On the whole, we put this among the best sorts. We see it has figured largely at the Kentucky exhibitions. Bishop's Orange and Crimson Cone are two old varieties that always yield well, and the fruit is of good quality; size medium. Burr's Scarlet Melting is a medium sized, tender fruit, and an immense bearer. Jenney's Seedling is a large, fine variety, that we think will prove valuable.

British Queen.—This magnificent English fruit, the queen of all strawberries, does not succeed well in this country; we have not seen a good specimen this year. It is almost abandoned; but we learn from the *Horticulturist* for July, that Dr. HULL, of Newburg, has succeeded in raising a mag-

nificent crop—Mr. DOWNING says, “much the finest flavored and most beautiful large strawberries that he has seen grown in this country. The color is darker and they appear to have attained a perfection of quality never reached in England.” We would cheerfully travel from Rochester to Newburg to see better “British Queens” than we have seen in England. [Mr. Downing also says that they were scarcely half the size of some he had seen in England.]

Our seedling Genessee has sustained itself well; the crop this season was the best on our grounds. We know of no other variety that shows better in the bed; the fruit is so uniform, of a fine, clear, red color, and stands well up. It must become a valuable market sort; deficient in fine flavor.

Monroe Scarlet and Orange Prolific are both valuable seedlings of ours, great bearers and hardy. Our neighbors, Messrs. BISSELL & HOOKER, have also some seedlings that promise well.

We imported, last season, some six or eight famous new English sorts, but none of them have yet produced a crop to judge from or pass an opinion upon, except the Bicton Pine. This is a large, beautiful, high flavored berry, exceedingly fragrant; white, slightly tinged with rose. It bears well, and is really a novel and interesting acquisition.

If we live till next year, we hope to be able to record successful results from Walker's Seedling, Moyamensing, McAvoy's No. 1 and No. 12, Schneike's Hermaphrodite, and many other native and foreign sorts that we shall have in full bearing state.

P. Barry, in Genessee Farmer.

REMARKS.—See to it, strawberry growers of Cincinnati! your laurels may be wrested from you by those energetic pomologists of our rival horticultural city. They have the good taste, however, to award us the meed of being extensive pioneers in the successful propagation of this delicious fruit.

NOTICING that Mr. SOUTHWORTH, of Penfield, (who you will remember was awarded our Society's first premium for Burr's New Pine strawberry,) was bringing large quantities of strawberries daily to market, I requested him to report his success in his first

attempt at raising this fine fruit. His land is of a sandy loam, and he says that the frost never throws out the roots, by which they so often perish. Last season he planted out five-eighths of an acre of the vines of Early Scarlet, Hovey's Seedling, Burr's New Pine, and Alpine. His Scarlets produced early and well, and his entire crop he estimated at 2000 quarts, which he sold in our market at \$265. He has taken up his Alpine, and planted the same ground and half an acre more with Burr's New Pine, which he says bears double what the Hovey's do.

JAS. H. WATTS.

ROCHESTER, N. Y.

Healthfulness of Grapes.

THE New York Commercial, in an article on the grape, states that this fruit is one of the best and most wholesome medicines.—This affords an additional inducement for the cultivation of a very popular fruit. The Commercial says:

In the vineyard districts of France, Spain, and other wine-growing countries, the medical properties of the grape are well known and highly prized. The free use of this fruit, as we are advised, has a most salutary effect upon the animal system, diluting the blood, removing obstructions in the liver, kidneys, spleen, and other important organs, giving a healthy tone and vigor to the circulation, and generally augmenting the strength of the entire animal economy. In diseases of the liver, and especially in that monster compound affliction, dyspepsia, the salutary and potent influence of the “grape diet” is well known in France.

The inhabitants of the vineyard districts are never afflicted with those diseases; which fact, however, alone, would not be conclusive evidence of the medicinal qualities of the fruit of which they freely partake, since peasant life is rarely marred with this class of ailments; but hundreds who are thus afflicted, yearly resort to the vineyard districts for the sake of what is known as the “grape cure”—and the result proves to be a cure, except in very long, protracted and inveterate cases, which are beyond the reach of medicinal remedies. The invigorating influence of the ripe grape, freely eaten, upon the feeble and debilitated, is very ap-

parent, supplying vigor and the rosy hue of health, in the stead of weakness and pallor, and this by its diluting property, which enables the blood to circulate in the remoter vessels of the skin, which before received only the serous or watery particles.

In these remarks, however, we must be understood as speaking of the fruit when perfectly ripe. Unripe grapes, like all unripe fruits, are detrimental to health, and derange the digestive organs, and those dependent upon and sympathizing with them.

Preservation of Fruits.—American Figs.

THE practical good sense of the following suggestions by Prof. Mapes, will commend them to those who are blessed with good crops of fruits; and if not applicable this year, may be noted for future reference and application in the years of greater productiveness, for which some of us still hope.

When in New York state, the other day, I heard the farmers descanting upon the virtues of dried raspberries, prepared in the way here suggested, and which retain their peculiar flavor in a remarkable degree.—The fine flavor of oranges and lemons also, may be perfectly preserved by saturating their juices with pure sugar, and simply sealing the bottles; the essential oil of the skins is easily secured by grating them with pieces of hard loaf-sugar, which may be added to the mass or preserved separately. Lemon syrup, thus prepared, has been kept perfectly for years, in a common cellar, without change.—ED.

Many new methods have been invented within the last few years for the preservation of fruits. Among these we would name the following:

Strawberries, pine-apples, raspberries, and many other small fruits, may be preserved without any loss of their original fruity flavor, by the sun's heat alone. When strawberries and other delicate fruits are cooked with sugar, by fire-heat, the aroma, which is resident on the surface of the berries, and is of a very volatile character, soon passes off, and the *preserves*, as they

are called, are simply an admixture of the acid and fixed oils with sugar, bearing a very slight resemblance, if any, to the original taste of the fruit. All the advantages to be derived from the use of the sugar may be availed of, without the assistance of fire-heat.

Place the strawberries, or other fruits, on shallow dishes, covering them entirely with finely pulverized sugar, using the same quantity as would be required to preserve them in the ordinary way. Expose these dishes on a metallic roof, or any other exposed position, to the full action of the sun, for a few days, removing within doors during dull weather, nights, etc. The juice of the fruit, as it exudes, will become saturated with the sugar, and when the whole quantity has passed into a syrup, the results may be preserved in jars, and will be found to resemble the original flavor of the fruit much more closely than by the old method.

A preparation of peaches, under the title of "American Figs," was shown us by Mr. Charles Downing, of Newburg. The peaches were first peeled, then cut in halves, and the stones removed; they were next placed on plates, with their hollow sides up, and containing one-sixth of their weight of sugar.

After having been sufficiently dried in an oven, they may be stowed away in jars or boxes, like figs, the texture of which they materially resemble, while their flavor is entirely superior. They may be swollen by water, and used for pies, tarts, etc., and are very superior in quality to the ordinary dried peaches. Cherries, and other fruits, have been preserved by Mr. Downing, in a similar manner, and with equal success.

Working Farmer.

Cracked Pears.

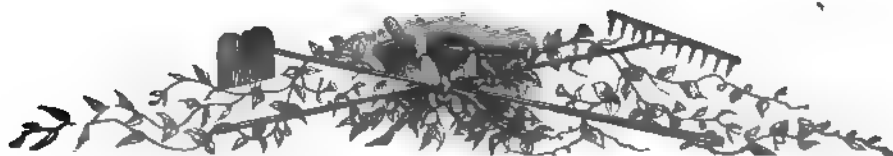
THIS disease has made its appearance in some parts of the western states, especially upon that universal favorite, the White Doyenné. We therefore look with interest upon everything that promises immunity from the evil. In the Horticulturist is this notice—Who will explain the influence of the different stock upon the graft, and why, being double worked upon an early variety,

the fruit should be six weeks later in ripening than on the parent tree?

On the premises of Mr. S. Wilhelm, in Easton, Pa., I saw an old pear-tree; it was the early Madeleine, the first branches of which were about twenty feet or more from the ground, and at a distance of about fifteen feet from this tree, stood a young Doyenné, about nine or ten years old, full

of cracked fruit. A scion from this tree was set on a small branch of the old pear-tree, being on the north side, and perfectly shaded by the branches of foliage immediately above it.

This scion, which had grown there four or five years, was laden with the most perfect fruit, which ripened about six weeks later than that of the young tree wherefrom the scion was taken.



The Garden.

ASPARAGUS.

Application of Salt to Asparagus.

THE editor of the Working Farmer makes the following suggestions as to the application of this substance. His scientific knowledge enables him to direct the season when such special manure may be applied with the best advantage. In the summer, after the cutting season, it will take care of itself, and in the autumn and winter so soluble a substance will be washed away.

In answer to several communications, we would state that salt will not injure asparagus, but tend materially to insure its growth. Salt is composed of chlorine and soda, each of which is necessary to the perfecting of the plant. It should be applied in early spring while the plants are growing, and not after the cutting has ceased in summer. It is of but little use, when applied with a coating of manure in the fall.

Is Asparagus a Marine Plant?

ASPARAGUS is generally believed to be a marine plant. I have very often inquired of such as asserted this, on what shore it was found growing wild; I could not, however, obtain any definite answer, the general result of my inquiries being this, that it

was *thought so*, and that *the books said so*. It is incredible, how much there is believed on mere authority; but human authority, however great, is always injurious to truth, which never will or can be impaired by a thorough, but of course sincere, investigation. Truth will defend itself. There is no difference in the *absolute* value of single truths, because their contrary is error; still there is a great difference as to their practical importance.

Being unable to settle the question in regard to asparagus by literary means, I can not but resort to what I have seen and experienced myself. Some ten years ago I traveled on foot nearly all along the sea-shore from Holland to Denmark for scientific purposes, especially for the preparation of a work on ornithology which was published in 1845. I spent weeks and months on islands in the North Sea, visited the shores of the Baltic and of the Mediterranean. I have been engaged for years in collecting the marine plants of northern Germany, for a friend who intended to publish a special flora of them. But *I have never met with a single asparagus plant* near the sea-shore in northern Germany.

There is a ridge of hills to the south of the Hartz mountains, running parallel with them, and called "Die Hainleite." I was

born in a little village among those hills, and recollect very well, that not very far from it, but nearer to the town of Frankenhäusen, there was such an abundance of asparagus plants in the woods, that children used to cut them there and sell them in the towns adjacent. I have cut them myself many a time, when a boy, and upon inquiry whether asparagus had always grown on those hills, I was informed that they had been there from time immemorial. The soil where they grow there, is calcareous.

In making asparagus beds in Germany, we dig them five feet deep, fill them with the richest possible soil, but which must be free

from undecayed manure. This soil is previously mixed with some air-slaked lime and brick-dust. A friend of mine in northern Germany, who was desirous of having an asparagus bed, but who could not procure the necessary manure, followed the hint he took from my relating him that I had seen the asparagus growing in the woods, and filled his bed with brushwood and friable, very sandy soil from his garden. His asparagus was the finest I have ever seen. I have already prepared a bed here for the same experiment, it being worth trying.

C. Siedhof, in New England Farmer.

NEW ROSES.

Among the novelties observed in different gardens in Philadelphia, Rochester, and elsewhere, during the season, I may take Mr. Barry's list from the Genessee Farmer, of those he has proved the present season. I have seen most of these flowers, and concur in the remarks of Mr. Barry, especially agreeing with him as to the old favorites. It will be observed by home readers that several of this list of *new* roses have become established favorites in the West; indeed, we may congratulate ourselves upon having in Cincinnati the largest and finest collection of roses.—Ed.

Among the new Hybrid Perpetual, or Remontant roses that have bloomed with us this season, are some excellent distinct varieties, that are very valuable additions to this interesting class of roses. We give the following garden notes of a few:

Baronne Hallez.—Light crimson, with a carmine shade; beautifully formed; a good grower.

Caroline de Sansal.—Pale flesh color; nearly as large and fine as *La Reine*; robust growth, and large foliage; decidedly the best light colored one we have yet seen.

Gen. Cavaignac.—Rosy carmine; good shape.

Gen. Marangiez.—Rosy pink; beautiful form and robust growth.

Eliza Balcomb.—White, with a fleshy tint; small, delicate, and pretty.

Pauline Buonaparte.—Pure white; small; habit dwarf.

Madame Fremion.—Bright rosy carmine; good shape; free growth; distinct and beautiful.

Madame Lamoriciere.—Clear, transparent rose, under side of petals nearly white; perfect form; one of the very best; quite distinct.

Gen. Charnigarnier.—Purplish crimson; very large; habit vigorous; distinct and fine.

Madame Trudeaux.—Light crimson; large, finely formed; free growth; distinct.

Pius the 9th.—Deep red, with a purplish tint; large and fine; robust, and a profuse bloomer; quite distinct.

Standard of Marengo.—Brilliant crimson; a beautiful rose, but not very double.

Reine des Fleurs.—Pink, with a lilac shade; perfect form; a beautiful rose.

Commandant Fournier.—Rosy red; a large, bright, showy rose.

Comte de Montalivet.—Purplish crimson; very large, and finely formed.

Comte Bobrinsky.—Brilliant scarlet, with a carmine shade; a striking, superb rose; dwarf habit.

Poniatowski (Vibert.).—Dark, purplish crimson; outside dark, almost maroon; center light; changes; distinct and beautiful.

Nothing yet surpasses or equals the *Geant des Batailles* in dazzling brilliancy, nor *La Reine* in fullness and perfect form. *Baron Prevost*, *Duc d'Aumale*, *Wm. Jesse*, *Madame Laffay*, and *Robin Hood*, are also fine yet, and likely to remain valuable for some time.

The Best Roses.

THE old June Roses are nearly all destined to go out of culture with those who really seek for fine flowers. An article from the French is translated by Mr. Barry, of the Genessee Farmer, which will be in season for rose fanciers.

Section 1. Perpetuals or Portlands.—The Roses of this section have the thorns very fine, short, and so numerous as to cover almost entirely the branches, to which they give a brownish tint. They have erect shoots, the flower stocks short and stiff, the flowers generally solitary and the ovary or seed capsule somewhat long.

Examples.—Rose du Roi, Duchesse de Rohan, Julie Krudner, Bernard, La Favorite, etc.

Sec. 2. Hybrid Remontants of Portland.—These have thorns, hard and sharp, variable in strength and length; the shoots erect, and their habit similar to that of the Portlands. They have also a lengthened capsule, and give often one to five or seven flowers, which form a bouquet erect and stiff at the summit of the branches. The Four Seasons Rose gives a correct idea of their habit and flowering.

Examples.—La Reine, Baron Prevost, Jacques Lafitte, Madam Laffay, Duchess of Sutherland, Amandine, Louis Bonaparte, Clementine Seringe, Glorie d'Angers, Comte de Montalivet, etc.

Sec. 3. Hybrid Remontants of the Isle of Bourbon.—The Roses which comprise this section appear to hold a middle or intermediate place between the Portland Remontants and the Bourbons, but more frequently present the aspect of the latter. The leaflets are in general strongly dentated, (toothed,) but the round form of the seed capsule distinguishes them from the Portland Hybrids. The disposition of the branches—extended in a confused and irregular manner—give them also a particular aspect.

Examples.—Clementine Duval, Comte Robrinski, Ernestine de Barente, Colonel Foissey, Geant des Battailles, Vicomtesse de Belleval, etc., etc.

Sec. 4. Bourbon Roses (Rosiers Isle Bourbon.)—This section comprises the Roses which have the wood very smooth and glossy, the side shoots often short, and then terminated by a single flower; but when a branch is developed vigorously, which often happens

in many varieties, it produces a longer side shoot, terminated by a cluster of flowers, from three to twelve. The thorns are strong, particularly at the base, scattered and hooked. The leaves are roundish oval, smooth, and of a deep green. The Roses of this section have the seed capsule round, and the branches developed horizontally for the most part.

Examples.—Queen of the Bourbons, Madame Desprez, Charles Souchet, Paul Joseph, Souvenir de la Malmaison, Souvenir de 4th May, Remond, Mrs. Bosanquet, etc.

Sec. 5. Noisette Roses.—These Roses resemble, somewhat, the Teas in their foliage, but are distinguished by a greater vigor; by their shoots being ordinarily very long; bark smooth, although more thorny, especially in some cases; by their branches being terminated by a cluster of flowers, in some cases very large.

Examples.—Amie Vibert, Lamarque, Ophire, Rose Mille-Ecus, Desprez du Luxembourg, etc.

Sec. 6. Bengal or China Roses.—The Roses of this section have a smooth bark—the branches generally but little thorny; the leaves more or less elongated and toothed; the flowers disposed in clusters or panicles—the slender shoots never giving but one flower. The capsule is round; the flowers are almost invariably colored, whilst in the Teas, to which these roses are often related, the flowers are more frequently white or yellow.—There are exceptions—Tea Bures, and many others. The flowers of the Bengal are rarely odorous.

Examples.—Bengal Ordinaire (Daily China,) Cramoisie Superieur (Agrippina,) Eugene Hardy, Beau Carmine du Luxembourg, Augustine Hensan, etc.

Sec. 7. Tea Roses.—These Roses have many characters in common with the Bengals—the bark of the shoots very smooth, with few thorns; the leaves are shining, and the flowers, often solitary, at the extremity of the branches, these being so slender that in most cases the flowers are reversed, and we see them only on the lower side. The branches generally do not acquire great length, but when the plants are vigorous, the branches are longer, stronger, and bear from three to five flowers in a cluster.

Examples.—Devoniensis, Safrano, Souvenir d'un Ami, Vicomtesse Degazes, Elize Sauvage, Bures, Goubault, Moire, Pactole, etc.

BEDDING PLANTS IN TURF.

In establishments of ordinary magnitude, thousands of plants are generally required for embellishing the flower-garden during the summer months, and the manipulator is not unfrequently at a loss to know what scheme to contrive to get pots equal to the demand. Such has been my experience, and it has led me to employ turf as a substitute, which (when it can be obtained) is an excellent material for the purpose; in fact, in point of economy it is very far preferable to pots. I do not pretend to infer that pots can be entirely dispensed with; my object is to show to a certain extent what may be done without their aid. Pots for the purpose of which I treat, are only required for about two months out of the twelve, and if we can lessen the number required, and that too advantageously as regards cultivation, it will be so much the better.

I find that plants in turf do not involve so much labor as they do in pots, for if in the latter, in very dry weather they require watering every day, and sometimes twice, whereas, if they are in turf, they only need it once a week, the roots have more food at command, the temperature and humidity of the bed being more uniform, and evaporation not so excessive as when the roots are confined within the narrow limits of small pots; besides, when plants that are in turf do require water, the watering can be effected expeditiously with the rose of the watering-pot, but in the other case it can not, for some may and some may not require water at the same time.

I have stated on a previous occasion that I propagate the greater portion of my bedding stuff on my vinery border, covering the cuttings with the portable tops of hand-glasses; they are thoroughly watered when put in, and the glasses are never moved (except to dry up superfluous moisture) until the cuttings are well rooted; directly the plants begin to grow, their tops are pinched-off to insure a sturdy growth; when in a movable condition, I prepare pits and frames for their reception. In these I dispense with artificial heat, by merely keeping the lights on and fully exposing the surface to the warming influence of the sun's rays. Shallow turf-pits are excellent for this pur-

pose; but if not naturally shallow, they are filled to within eight or ten inches of the top with half decayed leaves used for winter-forcing; these are made as solid as possible, and on them is laid an inch or more of coal ashes. These are indispensable, as they prevent the turf from adhering to the sub-soil, and render it capable of being taken out as entire and cleanly as when first put in.

The turf is cut into slips from two and a half to three inches in width, and laid on an even surface, with the grassy side downward. The whole surface being thus closely covered, small holes are cut about one inch deep, and one inch and a half in diameter, with an instrument I had made for the purpose, and with which a thousand holes can be cut in a very short time.

The turf being thus perforated, the plants are carefully lifted and placed in the holes, using leaf-mold and light loam, equal parts (sifted), with a portion of sharp sand; this compost is firmly pressed about the roots as the process of planting proceeds; when completed, a copious watering is given through a fine rose with tepid water. The lights are then put on and kept quite close, and shading is applied during the hottest part of the day. When the plants have emitted fresh roots and commenced growing, the shoots are constantly stopped, and plenty of air is given to keep them dwarf and bushy. To encourage rapid growth the lights are closed early in the afternoon, with a slight sprinkling over head in warm weather; but as the season for turning out approaches, protection is dispensed with altogether.—When that period arrives the sods are cut through between each plant and planted entire, giving a liberal watering, and choosing, if possible, dull cloudy weather for the operation.

Plants may be successfully and advantageously treated in this way by growing them in boxes two or three inches deep. In these variety and color can be arranged in each box respectively, and being portable, they can be shifted from one place to another with every facility. In labeling, one only is required for two or three score of plants, or two or three hundred when bedded in pits, precluding the necessity of individual

labeling, which is generally essential when pots are employed to prevent confusion.

Gardener's Chronicle.

REMARKS.—This plan of using an inverted sod has been applied in hotbeds for many plants that are not easily transplanted in the usual way—melons, cucumbers, etc.,—and there is no doubt it will be an admirable method for growing many of the flowers used in the modern method of bedding out. But the writer has set forth the advantages of the method, which is none the less desirable for its lack of novelty, especially as its efficacy has been proved.

Daphne Odora Rosea.

Of all the odoriferous plants with which I am acquainted, this is the most delightfully fragrant, surpassing, in the estimation of many, even the agreeable odor of the rose itself, or of the violet. It is moreover a hardy green-house plant, of very easy culture, requiring no forcing to have it in bloom during the short days of winter, when fragrant flowers are scarce and much esteemed.

This variety of Daphne is usually increased by grafting it on stocks of some of the hardy kinds; but I find that it grows more vigorously on its own roots than when worked on any stock which I have tried; and I am satisfied that propagation by cuttings is preferable. Pieces of the young wood selected when about half ripe, planted in sandy soil, covered with a bell glass, and placed in a close frame, will root freely if they are kept properly supplied with water, and guarded from damp. The cuttings should be got in as early in the season as they can be obtained, in order that they may have time to become well rooted in small pots, previous to winter. As soon as they are sufficiently established, put them in four inch pots, and place them for a time in a rather close and moist situation. During winter they may occupy a place in the green-house, and will require no extra care beyond what is given to the inmates generally.

The Daphne is a slow-growing shrub, and unless means are used to induce the young plants to make two growths during the second season, they will hardly be worth notice

as flowering specimens until they are three years old. In February, place them therefore in a moist temperature of about fifty or fifty-five degrees, and keep them freely supplied with water. As soon as they commence growing, examine the state of their roots, and if they require more pot room, shift into pots two sizes larger, and water very carefully after potting, for a week or two, until the roots have got hold of the fresh soil. During this time a sprinkling over head, morning and evening, will be beneficial. When they have completed their growth, which will probably be in about two months after placing them in warmth, it will be advisable to pinch-out the points of the shoots and remove the plants to a cooler and more airy place, where the young wood will be ripened, and the buds become plump. If the plants are allowed to remain in this situation for a month, and be then placed in a moist and rather warm pit or frame, they will break into free growth, and should be shaded from the midday sun, while the wood and leaves are young and tender. Any that may appear to have filled their pots with roots should be examined and repotted, if necessary, but the Daphne should never be overpotted; it is very impatient of stagnant moisture at the roots, and overpotting is not the best method of avoiding that. As soon as the growth is completed, begin to enure the plants to a drier atmosphere, exposing them to more air and sunshine, so as to secure the perfect ripening of the wood, and the production of blossoms. The formation of flower-buds will be indicated by the terminal buds becoming large and firm, and when this is the case the plants may be removed to a sheltered situation out of doors, or, if late in the season, to the green-house. All that can properly be done this season to secure succession of blossom, will be to place the most forward plants in the warmest part of the green-house, and leave the others to bloom later. As soon as they have done flowering, remove them to an airy place in the green-house, and shorten the stronger shoots, so as to secure a compact bushy habit of growth, and allow them to remain in this situation for about a month, or till the buds become plump. They may then be treated as recommended for last growing season, except that when the first growth is matured, they may be re-

moved to a sheltered corner out of doors. To provide for a long succession of bloom, after February the plants must be introduced at intervals, to a growing temperature, some being left to make their growth in the greenhouse.

end of February will flower about the end of September or early in October, and with a little care in keeping the most forward plants in the closest part of the greenhouse, etc., there will be no difficulty in keeping up the supply of flower till May.

A soil composed of two parts of rich friable turfy loam, and one part of turfy peat, freely mixed with silver sand and potsherds, broken rather small, will suit this *Daphne*.

The loam and peat should be carefully broken up into rather small pieces, divested of all inert soil, and minutely intermixed with the sand, etc. In potting, make the fresh soil rather firm about the ball, and be especially careful to secure efficient drainage, as the plant will not succeed if there is stagnant moisture at the roots.

Gardener's Chronicle.

Thank you, Dr. Lindley, for bringing forward this beautiful favorite. The odorous winter bloom of this class of plants should make it universally admired, and I have often wondered that it was so scarce in our collections.—Ed.

Sixth Ohio Agricultural Report—1851.

An acknowledgment is cheerfully rendered to W. W. Mather for his kind thoughtfulness, in sending a copy of this work, in neat plain binding. Its appearance is quite an improvement upon the previous report, with a larger and better sized page.

As the volume contains 563 pages, it has not been very closely scrutinized in the short time since it came to hand. It contains:

I. The President's Report, and a General History of the Doings of the Convention of Delegates from County Societies;

II. The Proceedings of the Board through the Year, and its Organization;

III. An Account of the Second Ohio State Fair, with Reports of Committees;

IV. Laws of the State referring to Agriculture;

V. Report of the Corresponding Secretary, with Analysis of Soils and Substances, and Geological Relations of the State—(this is the most interesting and valuable portion of the book;)

VI. and VII. Lists of Agricultural Societies, and Statistics of Productions, and Reports of County Societies;

VIII. A Premium Essay on the Character, Composition, and Improvement of the Soils of Ohio, by Charles Whittlesey—a valuable paper, though marvelously short for the subject, which embraces a surface of 44,000 square miles!!

IX. Descriptions of some Farming Implements;

X. The Premium List for the Third Fair, to be held at Cleveland, on the 15th, 16th, and 17th of September—articles for competition are arranged in nine classes;

XI. Pedigree of a Bull, and the History of a Family of Short Horns.

Now here is a pretty good notice and analysis of the book, which has been subjected to only a hasty glance, and not at all thoroughly criticised, whereas, it was only intended to acknowledge the politeness of the Corresponding Secretary, in forwarding it.

It is a matter of regret to some persons in Ohio, that the County Reports do not contain something more than a mere detail of organization and premiums, and that this whole volume should not be filled with statements of the methods of production and culture that are most successfully pursued, essays, and much other valuable matter, to make this report what it ought to be, *The Book*, that we still fondly anticipate we shall have furnished by the State Board—a full statistical account of one of the greatest agricultural states in our Union.



TRANSACTIONS.

THE CINCINNATI HORTICULTURAL SOCIETY.

THIS Society, claiming, as she does, to be one of the oldest, and the greatest institution of the kind in the West, and vying with the first societies of a kindred character in the older states, continues to give evidence of the zeal and enterprise which have generally characterized her movements. The Saturday meetings have been well attended during the summer, and the tables have been so well covered with beautiful and tempting topics of discussion, in the shape of lovely flowers and luscious fruits, that the abstract, though practical topics of discussion, which afforded so much information, in the earlier portion of the season, have been necessarily laid aside, to a great extent, for the discussion of the more material and attractive objects before the members.

The displays of fruits have been quite rich, embracing liberal contributions of very many varieties, excepting peaches, of which but few have made their appearance. It would swell this report to enumerate all the varieties exhibited, but the show of Plums, on August 21, was so fine that it is transcribed:

From the Columbus Horticultural Society, a magnificent collection of Plums, in fine condition, Quetsche, Red Magnum Bonum, Yellow Magnum Bonum, Long Scarlet, Huling's Superb, Italian Prune, German Prune, Mirabelle, Prince's Imperial Gage, Cooper's Purple Gage, Seedling from Italian, Purple Favorite, Bolmar's Washington, Green Gage, Jefferson, Purple Gage, Emerald Drop, and one unknown, supposed to be Denniston's Red. These fine fruits were grown by Messrs. Blake, Sites, Latham and Greenleaf, of Columbus.

Wm. Cooper, of Springfield, Ohio—Empress, very fine and Yellow Gage, beautiful specimens, in very fine order.

Wm. Irwin—Prince's Imperial Gage, very fine, Yellow Magnum Bonum, Red Magnum Bonum, and another unknown.

T. K. Smith—Bleeker's Gage, very fine.

The displays of flowers have been very attractive on each successive day—among them the Remontant Roses from M. Kelly, the lovely Phloxes and brilliant Dahlias, each in great variety and beauty, from Wm. Heaver, the Double Hollyhocks from W. Cox, and the Japan and other Lilies from A. H. Ernst, were conspicuous. Among the novelties of the season were the beautiful Hoya bella, pretty Lycopodium arboreum, curious Nepenthes destillatoria, and other plants from S. S. Jackson; New Gladiolus, Lantana Ewingii, Dipterocanthus spectabilis, Zauschneria californica, Angelonia Gardneriana, etc., from Wm. Heaver.

During the discussions upon two varieties of early pears, called respectively Early Butter and Julienne, some discrepancy appeared to exist respecting their appropriate names; a day was set for the investigation, when, after a free expression of views, and com-

parison of fruits and descriptions, the members expressed their views decidedly that the fruit we have generally cultivated by the name of Julienne is correct, and that the pear called Early Butter, by Mr. Ernst and others in this country, is not the Julienne, as has been supposed by some contributors. The following description of the tree was furnished by Mr. Hatch:

Tree low, branches long and slender, a very sprawling grower; young wood quite yellow. The growth of this tree is peculiar, and, so far as I have seen, not correctly described by any Horticultural writer. At the termination of each year's growth of all the principal shoots, a bulb or knob is formed, nearly as large as a musket ball, from which several shoots grow the next season. The fruit is yellow at maturity, roundish to pyriform, size medium, generally less with me than the "Early Butter," to which I consider it inferior.—The latter opinion was dissented from by many who knew the Julienne pear.

The following delegates were appointed to the State Pomological Convention, to be held at Columbus, August 31: Robt. Buchanan, A. H. Ernst, Jno. A. Warder.

To the Pomological Congress, to be held in Philadelphia, September 13: A. H. Ernst, S. Mosher, M. Kelly, Jno. A. Warder.

A lengthened and interesting discussion upon the merits and demerits of the Ailanthus has been held at some of the meetings, in which the virtues and vices of this *Tree of Heaven* were freely canvassed. A committee was appointed to make a critical investigation of the charges brought against the individual that has done so much for Horticulture—but as the gentlemen appointed have not yet rendered their verdict, it may be well enough to submit parts of the discussion of the Society:—

The discussion on the alleged poisonous qualities of the Ailanthus was opened by Mr. Buchanan, who held in his hand a fine branch of the female variety, with numerous panicles of seeds, cut on the grounds of Mr. Shroeder. Mr. B. observed that he had been the first to introduce this tree to Cincinnati; he considered it a noble tree, and worthy of a place in ornamental grounds. It was, in the male variety, objectionable while in flower, on account of the smell of the pollen; and it had also the fault of throwing up suckers from the roots, which, in the country, would make it troublesome; he had never found it poisonous.

Mr. Ernst imported this tree early, like Mr. B., and had still the two parent trees growing luxuriantly on his grounds. He always considered it a beautiful tree in any situation, and eminently useful as a city shade tree, from its rapid, upright growth, exemption from insects, and entire hardiness under every state of our climate and soil. During a long experience, he had

never known any poisonous effects to proceed from it; and, without positive evidence that it was poisonous, he would never consent to discard it, merely to gratify some few sensitive noses during the short period of its flowering.

Mr. Foote said that he had, on one occasion, felt ill from having, during the evening, remained for some time under the Ailanthus trees while in flower; and remarked that it occurred before the tree was talked of as having any deleterious properties.

Mr. Yeatman gave a humorous description of the rapid growth of the first plants of Ailanthus he cultivated—found no poisonous effects from it, but would not plant it on account of the disagreeable smell of the flowers and its disposition to sucker.

The President, Dr. Mosher, said he considered the Ailanthus unrivaled as an ornamental or shade tree. The rich green and luxuriant growth of its foliage, its erect stem and palm-like head, gave an oriental character to our scenery. It belonged to a family of plants, (Xanthoxylaceæ,) which were remarkable not for poisonous, but for tonic and other medicinal qualities. He had never known the least ill-effects to proceed from the smell of its flowers, except the annoyance to the olfactories. He supposed, from analogy, that habit might make the smell agreeable to some noses. Its wood, seasoned, was said to be extremely hard, fine grained, and susceptible of a high polish. It may be found a valuable tree for cabinet-makers, etc., and may soon be profitably grown for fire-wood.

Mr. Graham said he had lived much in proximity to those trees; considered the effluvia of the flowers so great an objection that he would not plant the tree in the city; it was so disagreeable to ladies that they avoided the street where it was planted, while it was in flower. We had other trees, such as the Paulownia, of equally rapid growth, and equal beauty, whose flowers were fragrant; why not plant such? He admired the promptitude of the authorities at Washington in extirpating the Ailanthus trees from that city.

Mr. Hatch thought it a very valuable tree for city planting to those who could bear the odor. It would grow in situations where other trees would not.

R. M. Moore objected to the smell, and also to the manner in which the roots heave up the brick pavements.

Somebody hinted that all other trees have the same effect on brick pavements.

Mr. Ernst advocated the claims of the Catalpa in preference to the Paulownia as a shade tree.

Mr. Graham rejoined, and reiterated his argument in favor of the Paulownia.

Mr. Foote spoke in high commendation of the silver-leaved Maple.

The President said the discussion should be confined to Ailanthus.

Mr. Heaven—after enumerating the various qualities which entitled the Ailanthus to public favor—stated that he had Ailanthus trees surrounding his residence for years; had never found them prejudicial to health; believed with Dr. Mosher, that the smell of the flowers, although unpleasant, was rather beneficial to health than otherwise, as all his family and laborers could prove by their appetites during the time of flowering. He recommended the female Ailanthus to those who objected to the smell of the male, but would on no account condemn the Ailanthus, as the smell was a very temporary evil at most.

Mr. Kelly called attention to the now well-ascertained knowledge among scientific men, that the idea of poisonous effluvia proceeding from the Upas and other trees, was a delusion. He had himself grown the Upas tree in a hothouse, and never supposed it capable of injury except through the absorption of its juices; had never known any poison to exist in the sap or flowers of the Ailanthus; had grown thousands

of them; it never poisoned the hands of any of those who worked amongst it; believed it harmless—found the female, to a great extent, destitute of smell, but far inferior in grace and beauty to the male; believed it the best shade tree in the country; it created no dirt, as its leaves all fell at once after the first severe frost; said that few of the plants would sucker if grown from seed, and that if the fallen flowers were swept up and the trees shaken, the effects of the bad smell would not last more than ten days.

At the next meeting Mr. Orange stated that, in point of durability, it was scarcely second to any kind of wood, that we might as well talk of felling oaks, walnuts, and locusts, for some imaginary defect, as these beautiful, highly ornamental, and useful trees.

Gen. Wade disliked the odor of the Ailanthus leaves; thought it, however, an excellent shade tree for sidewalks; his greatest objection to its use in gardens being its propensity to send up suckers.

Mr. Kelly stated that he had been informed, through M. Vilmorin, a French horticulturist, that the Ailanthus, when grown from the seed, was not so prone to sucker as when propagated from the sucker-shoots themselves; that the gardeners of this country might attribute this annoyance to that fact. He then moved that the President should appoint a committee to form a report embodying the sentiments of the Society, with regard to the Ailanthus, that something tangible may be presented to the public upon this subject.

Dr. Mosher says, that in India it is considered one of the most durable and valuable of the forest trees, and that if it does possess the properties they attribute to it, it certainly is a most desirable acquisition.

Mr. Anthony stated, as far as he was able to learn, the great objection to the Ailanthus might be found in the odor of its flowers, which was so disagreeable to many persons, and that those who were willing to raise a crusade against the Ailanthus did it with the same feeling, and upon the same principle that they would present a petition to the council for the removal of those soap and candle factories in the north-western part of our city. For his part he was not partial to the smell of the tree, but that, in consideration of its beauty, its rapid growth, and its useful properties, the objection might be very easily overruled. And that it possesses poisonous qualities, has never yet been authentically proved.

Mr. Ives said that persons traveling in the South were frequently exceedingly overcome by the intense odor of the Magnolia grandiflora, and that upon the same grounds that we would exterminate the Ailanthus, might the Southerners be recommended to destroy the Magnolia.

Mr. Buchanan asserted that a single flower of great fragrance, as the Cape Jessamine, placed in a room, will sometimes produce a slight sickness of the stomach. He thought that there were many persons of such peculiarly delicate organizations that they would be disagreeably affected by even the most agreeable perfume, in strong quantities; and as far as the Ailanthus is concerned, he thinks the weight of evidence and opinion is fully in favor of retaining it. He has it in his avenue, and about his house, and would hardly be willing to dispense with its beauty and usefulness for so trifling an objection. Another quality is its hardiness—being able to stand our winters much better than the White Mulberry and many others.

Mr. Foote suggested its use as fire-wood, having tested it in that way.

Mr. Anthony confirmed what has already been said concerning its propagation from seed, and says the first trees imported were brought to Rhode Island.

Mr. Buchanan saw the female tree for the first time in Philadelphia, in 1838.

A shrewd old gardener suggested that all odors of flowers arose chiefly from the stamens, or male organs

This is worthy of investigation. It was also suggested that the male flowers might be easily cut off with a suitable instrument just before they expanded, and thus the nuisance near houses could be wholly abated.

Mr. Kelly's motion was submitted to the Society and carried, when the President appointed Messrs. Buchanan, Kelly, Ernst, Graham and Anthony, said committee.

On Saturday, July 31, at the opening of the meeting, the President arose and announced to the Society that the telegraphic account of the loss of the steamer *Henry Clay*, on the North River, contained a report of the death of A. J. Downing, Editor of the *Horticulturist*, the friend of horticultural science in the United States. Members expressed an earnest hope that there might be a mistake in the telegraph, even though it were hoping against hope.

Mr. Heaver moved that R. Buchanan, A. H. Ernst, and S. Mosher, be appointed a committee to draft resolutions expressive of the deep sympathy felt by our Society in the supposed loss of this eminent friend of horticulture; and in the hope that we may have been misinformed, to withhold their report to next week. A general gloom pervaded the Society, every man feeling that he had lost a friend.

At the next meeting the committee rendered the following report, which was silently adopted by the Society:

The sad intelligence of the loss of the steamer *Henry Clay* on the Hudson river, causing the untimely death of a great number of our friends and fellow-citizens, has been confirmed. Among the lost, we are called upon to lament the death of our distinguished and zealous fellow-laborer in the cause of horticultural science and rural taste, A. J. Downing, of Newburg, New York, editor of the *Horticulturist* and corresponding member of this Society: therefore,

Resolved, By the Cincinnati Horticultural Society, that in his death we have lost a most valuable friend and contributor to the cause in which we are engaged, and that the country has to deplore one of its most valuable promoters of refinement in rural taste.

Resolved, That we sympathize sincerely with his family and friends in the deep affliction and bereavement which it has pleased the Almighty disposer of events to visit upon them in so untimely and unexpected a manner.

Resolved, That a copy of the foregoing preamble and resolutions be forwarded to the bereaved wife and family of the deceased.

The following resolution was offered by Richard Davis, seconded by M. Kelly, at a late meeting:

Resolved, That the members of this Society and horticulturists generally, be solicited to raise a subscription for the purpose of erecting a monument to the memory of A. J. Downing, Esq.

It was next moved by Mr. Ives that a committee of three be appointed to carry out the spirit of the foregoing resolution. Messrs. Hatch, Kelly and Warder were appointed.

In closing this abstract of the doings of our Society, it may be well to state that great anticipations are entertained respecting the autumnal exhibition, to be held on the 29th of September next. Contributions of fruit and flowers will be gladly received and carefully placed by the committee, whether the exhibitors can accompany them or not.

The following awards have been made during the season:

Best peck of Potatoes, (Ash-leaved Kidney,) to H. Ives, \$1 00.

Plate of fine Tomatoes, to M. McWilliams, \$1 00.

Best Cherries, to M. McWilliams, \$3 00.

Best Gooseberries, to Jas. Hall, \$3 00.

Best display of Gooseberries, to H. Moore, \$3 00.

Best Early Fruit, to M. McWilliams, \$2 00.

Best display of Fruit, to M. McWilliams, \$3 00.

Best Pears, to M. McWilliams, \$3 00.

To Wm. Heaver, for a fine collection of perennial *Philoxes*; also, several varieties of *P. Drummondii*, and several other plants in flower during summer, \$2 00.

To Mrs. W. Orange, for her collections of deciduous and perennial cut flowers at various times during the season, \$3 00.

To Wm. Cox, for fine collection of Double *Hollyhocks* the first week in July, \$2 00.

A collection of premium lists for the State Fair was received from the State Board of Agriculture.

American Wine-Growers' Association,

HELD their last monthly meeting at Mr. Buchanan's residence, Green Hill. After reading the minutes, the following gentlemen were unanimously elected to membership: Flamen Ball, Wm. Orange, Wm. Resor, Marcus A. Finch, B. McConkey, and Mr. Mummert.

The President read an interesting paper upon the condition and prospects of the grape crop for the year 1852, including the effects of the cold winter and wet spring, and filled with valuable suggestions as to the influence of special manures and judicious treatment, [which unfortunately has not been received in time for publication in this number.]

Mr. Buchanan stated that he had seen only a dozen vines with yellow leaf in his vineyard, but thought he had corrected it by applying ashes; Mr. Yeatman had noticed the same thing. Dr. Mosher and others, in confirmation of the statements made in the paper by the President, stated the second hoeing had restored the color.

Mr. Rintz, one of the best and most judicious vine-dressers, referring to the river vineyards, said that he had observed the yellow leaf depended upon excessive rains, as it disappeared in dry weather; he had no yellow in his own vineyard, which lies upon the hills.

Dr. Mosher confirmed this statement, as all the vineyards about him, that had appeared so badly in the beginning of the month, were now recovering since the dry weather had set in.

Mr. Yeatman questioned whether the yellow leaf were injurious—he had supposed that it might be owing to excess of lime—had seen the most healthy vines this year at Shuman's—they had excellent wood and fine color of leaf, but no fruit—there was no yellow leaf—grass growing among them—they are on the sandy second bottom from the river—Mr. Werk had no rot in his high trained vines, which are planted 20 feet apart in a meadow.

Mr. Rehlfuss reminded members that the yellow leaf was observed first, the rot next—they may have some connection.

Mr. Buchanan read a letter from Mr. A. B. Church, of Princeton, Ill., giving an account of the grapes grown in that country.

The Society then adjourned to the table, where they critically examined twenty-two varieties of native wines, produced by different vintners. Some of these were pronounced superior—most were admired, and notes were taken of their respective qualities.

Two results were drawn from the investigation:—1. That wine in bottles would ripen faster in one year in a garret, than in the same period in the cellar. 2. That peculiar characters might be imparted to the wine by fermenting it upon skins by special manures, etc.

Rambles about the handsome orchard, garden and vineyard, were much enjoyed by the visitors; everything being in perfect order—the vines clean, snugly tied up, and well laden, with rich promise of 300 gallons per acre. Mr. B. has not suffered so much with the rot as some others, but a fear was expressed that

this malady was not yet done, some grapes still showed indications of its effects.

By way of showing the character of the soil and the subsoil, Mr. Buchanan had dug several holes in different parts of his vineyard, to the depth of about four feet; about half this depth, so far as the ground had been trenched, the soil was friable and of good color—below this, the subsoil was of the toughest yellow clay; but even in this resisting substance, numerous fresh roots of the grape could be found at the very bottom of the holes!

The vines of this establishment had the appearance of remarkable health and vigor, and do great credit to the skill of the directing genius of the place.

Zanesville Horticultural Society.

THIS spirited little Society appears to have had a good time of it during the summer. The stirring members, who must be of the right sort, too, continue to hold meetings every week and vie with each other in presenting fine specimens of the earth's productions, which should amply reward them for their toils.

From the dates at which several vegetables were produced, it would appear that the warm sandstone soil and sheltered nooks in the valley of the Muskingum, enabled Zanesville to vie almost with our city in early productions of vegetables. These, though not so beautiful and attractive to the finer sensibilities as the lovely Rose, dazzling Tulip, Dahlia, and other offerings of Flora, are nevertheless ministers to very respectable wants of the animal economy, and as such, are deserving of every care and attention—as evidences of civilization, all kinds of "garden-sauce" are greeted by the intelligent traveler as harbingers of good society and an improving state of things in the community.

Messrs. Cherry, Barnard, Cox, Brookover, and others furnished different varieties of various fruits, also, that are quite creditable; Apples, Pears, Plums, etc.

Genesee Valley Horticultural Society.

DEATH OF A. J. DOWNING.

AT a special meeting of the Horticultural Society of the Valley of the Genesee, held in the city of Rochester, August 12, 1852, the President, on calling the meeting to order, stated that he had called the members together at the suggestion of others, and in accordance with his own sentiments, to express in some suitable manner, the feelings of the members in regard to the sudden and melancholy death of A. J. Downing, who had been for many years an honorary member of this Society.

On motion of M. G. Warner, a committee of five were appointed to prepare resolutions for the consideration of the meeting.

The President appointed M. G. Warner, Jas. H. Watts, H. E. Hooker, Geo. Ellwanger and A. Frost.

The Committee, through their Chairman, reported the following preamble and resolutions—which were unanimously adopted:

Whereas, in the death of A. J. Downing, American Horticulture has lost its noble and gifted standard bearer, and society one of its most amiable, accomplished and useful member—who has done more than any other to awaken among the American people an appreciation of their country's resources, and to cultivate and diffuse a love for the beautiful in nature and art—whose writings, brilliant and powerful in style, and truly American in sentiment, have given us a Horticultural Literature which commands the admiration of the world: therefore,

Resolved, That we regard his loss as one of the greatest that could in this day befall the American people in the death of any one man—that we deeply

sympathize with his afflicted friends and relatives, truly "mourning with those who mourn" for the loved and lost.

Resolved, That though Mr. Downing is no more, and his voice is hushed in death, yet he still speaketh—his works will live after him, and his influence be felt while correct taste has a disciple or a home in the earth.

Resolved, That we recommend the Horticultural Societies of this country to take some united action, to testify in a suitable manner their regard for the memory of Mr. Downing; and that a committee of three be appointed, to correspond with other Societies on the subject.

P. Barry, L. Wetherell and Jas. H. Watts were appointed a committee in accordance with the resolution.

Resolved, That the proceedings of this meeting be furnished the various Horticultural papers, with a request to publish the same, and a copy thereof be forwarded by the President of the Society to the family of the deceased.

P. BARRY, President.

JAMES VICK, JR., Secretary.

Massachusetts Horticultural Society.

THE exhibition at the Horticultural rooms, Saturday, August 7th, was much superior in quantity and quality to that of several previous weeks. There was a good display of flowers, but the fruit attracted the most attention. On the tables we noticed some luscious looking peaches from J. Fisk Allen, of Salem; Hovey & Co.; Edward King, of Dorchester; and M. H. Simpson, of Saxonville. Some fine pears by J. S. Cabot, of Salem; Josiah Lovett, 2d, of Beverly; and Henry Vandine of Cambridgeport. Some superior blackberries by Galen Merriam, of West Newton, and C. E. Grant, of Mount Pleasant. There were also some very fine early apples exhibited by several contributors. The attendance was larger than usual.

DEATH OF MR. DOWNING.—Resolutions of respect for the character of the late A. J. Downing, who perished on the Henry Clay, and of sympathy with his family, were passed. Hon. Marshall P. Wilder, was also invited to deliver an eulogy on the life and character of the deceased, at such time and place as the Society may hereafter designate.

The Columbus Horticultural Society

HAVE done honor to both head and heart of theirs, by the prompt action had on July 30th, upon receipt of the sad news of Mr. Downing's death; when the following resolutions were passed.

Whereas, news has been received of the loss of the steamer Henry Clay, by fire, on the Hudson; and among the lost we find the name of A. J. Downing, of Newburg, the editor of the Horticulturist: therefore, be it

Resolved, That while we deplore the loss of so many lives, and sympathize with those bereaved, we learn with feelings of sincere regret and profound grief, of the death of the distinguished Horticulturist, A. J. Downing. That while horticulture engages the attention and enlists the feelings of many, none have surpassed the deceased in intelligence, enthusiasm, industry and devotion, in all things that relate to rural art and rural taste,—none have left more enduring or more beautiful monuments of their labors than he. Death has surprised him in the midst of his usefulness and success, and just as his cultivated taste was being fully appreciated by the nation. Who can fill his place?

Resolved, That as an honorary member of our Society, we feel that we have lost a brother, whose writings and teachings have been our pleasure and our

guide, and whose memory we will cherish as one worthy of our love and esteem.

Resolved, That in this bereavement, we sympathize with his family, and the friends of horticulture every-

where; and as a token of our esteem, we will place these resolves on our minutes, and forward them to be published in the journal which he has so ably edited.

Editorial.

THE FRONTISPIECE.

THIS pretty church is that of St. Ansgarii, in Chicago, erected by a congregation of poor exiled Norwegians, who here sought shelter from the bleak coasts of the Northern Ocean, and who yet obey "the laws of parallel emigration," to a certain degree.

The spire is assumed by the ingenious young architect, (himself a Norwegian,) as a something to remind his countrymen, when they go to worship, of the wild scenes amid the pines of their native Norwegian hills, where, uninterrupted by sounds of civilization, they might commune with their Maker, in the awful grandeur and sublimity of nature. Mr. Knudson has desired to erect a rural church; and it is intended to surround this building with the beautiful evergreens that are natural to the region where it stands.

The structure is thus favorably noticed in the papers of Chicago:—

"The Norwegian Church, being erected on Indiana street, north side, for the accommodation of the society of which Mr. Unonius is pastor, is now so nearly completed, externally, that a good idea may be formed of what its appearance will be when quite finished. There is not another church edifice in the city, in which there is such harmonious combination of grace and dignity, simplicity and beauty, both of design and finish.

"The style is a mixture of the Gothic and the modern Cottage, and the two orders, though separated by so many ages, seem, associated in the present instance, admirably adapted to each other. Mr. Knudson, a young but promising architect of our city, is the designer and builder."

Mr. K. is now exercising his talents in Cincinnati, and will be happy to hear from those desiring his services.

Fall Shows.

PREMIUM LISTS, (state and county,) bills, pamphlets and newspapers come by every mail, freighted with information respecting the fairs, both great and small, that are to come off within the few weeks that are approaching.

Here are the pamphlets of rules, premiums, etc., from the great states of New York, Pennsylvania, Ohio, and Indiana—a great central quartette of empires—the first of which is to lead off, after the adjoining state, Vermont, shall have opened the dance and the month at Rutland. Improvement appears to have been made on previous lists; but in this respect the central bodies have yet much to learn, if they ever reach a sufficient degree to satisfy the people; an Augean task, indeed!

Kentucky will follow New York; then the great Pomological Congress at Philadelphia; to be followed by the Pennsylvania Horticultural show, so widely and so favorably known; and the Ohio State Fair at Cleveland, the Rhode Island Society at Providence, the Buffalo and Rochester Horticultural Societies,—all come off simultaneously, causing a terrible division of interest. Then the Canadians are to show their patriotism at Toronto, on the 21st, and the Peninsular State is to be concentrated at

Detroit, on the 22d; when a short respite occurs, to give the counties a chance, until the Fruit Growers of Illinois meet at Dixon, and the Horticulturists of Cincinnati, at home, on the 29th, to wind up the month. And for the rest of the items the reader is referred to the 4th page of the Advertiser, where the list of shows has been kept all the season.

The Editor will attend many of these exhibitions, for the sake of meeting friends, and seeing fine productions of the garden and orchard; full notes of which will be taken for the future use and edification of the readers of the Review.

Among the subordinate fairs that possess peculiar interest are the great central County of Franklin, where they have arranged buildings upon a beautiful site east of Columbus. From the premium list, it appears they hold a fair on the 7th and 8th of October.

The old Combination Society of Clarke and Madison counties—a strong and tried team, well managed—will exhibit at London on the same days; and they have shown their good taste by electing a speaker to address them, on the 3d day, October 8th.

Death of Mr. Downing.

No mourning lines appear in this number—no elaborate obituary notice. Some events may be too deeply felt for utterance.

He whom the people have loved and honored, is fallen—the nation mourns his loss—words can not express our grief. His eulogies are yet to be written.

Pomological Congress.

THIS body will meet, as heretofore noticed, on the 13th of September, in Philadelphia. The session is expected to be of peculiar interest. The remarks of JEFFRIES, upon this topic, in the Horticulturist, are admirable. I wish the crowded state of these

pages would admit of their being copied entire. He recommends that *new* matter be brought forward, and that strong committees be appointed to sift the reports preparatory to publication. Philadelphia is indeed a favorable point, and it is hoped that a large attendance of delegates will be present.

American Scientific Association.

It was a cause of general regret, among western members, to receive the announcement that the meeting of this Association was postponed on account of cholera.

THE TROPICAL FARMER: Ocala, Florida. Lewis C. Gaines, Editor. Terms, one dollar a year—deduction to clubs—always in advance.

This unassuming quarto monthly voice from the everglades, promises to treat of agriculture, horticulture, and the introduction of tropical fruits. In this last department will be found its chief interest to those of us who have been looking for years to this southern peninsula, with the deepest anxiety, to watch the advancement of experiments in the culture of tropical productions.

Do not disappoint us, Brother Gaines—we want to know all about it, and will give you any desired information in return.—What has become of the early efforts of Dr. Perrine?

The first number contains a good assortment of matter. In his appeal to the press, the editor says:—

“Gentlemen, if you can spare the time, will you do us the favor to look over this our first number; and if you should discover in our effort the germ of future usefulness, will you take us under your fostering wings? till cherished by the balmy dews of public patronage, we may mature into a full grown tree; and side by side with you, bear fruit—apples of gold in pictures of silver.”

To which all will respond—“Come under our wings, Lewis.”

METEOROLOGICAL TABLE.

CINCINNATI, JULY, 1852.

THERMOM.			WEATHER.			RAIN.	Date.	WINDS, ETC.	
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.				
1	75	86	variable	clear	rain, clear	25	1	Light S.; brisk S.; high SW. and NW.	
2	59	74	clear	do.	clear		2	Light NW.	
3	60	81	do.	do.	do.		3	Calm; light SE.	
4	59	87	do.	do.	do.		4	Calm; light SE.	
5	71	94	do.	do.	do.		5	Calm; light SE. and SW.	
6	74	97	do.	do.	do.		6	Calm; light SW.; brisk SW.; light SW.	
7	73	69	do.	do.	do.		7	Light SW.; brisk SW.; light S. [light S.	
8	76	98	do.	do.	cloudy		8	Light SE. and SW.; brisk SW. to N.; high S;	
9	74	87	var., rain	do.	clear	45	9	Calm; light S. to SW.; calm at e. [New corn.	
10	75	94	fog, clear	do.	do.		10	Calm; light SE, S. and W. to NE. [Tomatos.	
11	74	89	clear	do.	rain, clear	65	11	Calm; light S.; brisk SW., light SW.	
12	74	92	do.	rain, clear	var., rain	25	12	Calm; light SE.; brisk SE. and NE.; calm.	
13	75	90	do.	clear	clear		13	Calm; light SW. and W. [Cantaloupes.	
14	69	87	do.	do.	do.		14	Light NW. and E	
15	68	84	do.	do.	cloudy		15	Light E. and NE.	
16	68	80	do.	do.	rain, var.	10	16	Light E.	
17	66	85	do.	do.	clear		17	Light N.	
18	67	87	do.	do.	do.		18	Light NW. and NE.; calm.	
19	69	90	do.	do.	do.		19	Light E.; calm at eve.	
20	69	92	do.	do.	do.		20	Light E.; brisk SE.; light SE.	
21	72	95	do.	do.	do.		21	Calm; light SW. [Sweet potat w.	
22	74	96	do.	do.	do.		22	Calm; light SW.; brisk SW.; light W.; calm.	
23	75	97	do.	do.	do.		23	Calm; light NE.; calm at night.	
24	76	94	do.	do.	rain	20	24	Light SE. and NE.; brisk SE.; thunder; calm.	
25	74	87	variable	do.	do.	10	25	Light SW. [Water-melons.	
26	72	87	cloudy	do.	clear		26	Light SW. and SE.	
27	69	89	clear	do.	do.		27	Light SE. [tins depart.	
28	69	92	do.	do.	do.	05	28	Light SW.; shower at night; thunder. [Mar-	
29	76	96	do.	do.	do.		29	Light S.; brisk SW.; thunder at night.	
30	77	89	do.	do.	do.		30	Light W.; brisk W. and NW. [Wild cherries.	
31	66	78	do.	do.	do.		31	Light N. W.	
Inches, 2.05							Mean temperature of the month.....80.11		
							do.	do.	July, 1851,.....79.12
							do.	do.	do. 1850,.....81.65
							do.	do.	do. 1849,.....76.42
							do.	do.	do. 1848,.....73.86
							do.	do.	do. 1847,.....74.42
							do.	do.	do. 1846,.....76.00
							do.	do.	do. 1845,.....75.84
							do.	do.	do. 1844,.....78.47
							Mean temperature of the above 9 months, ....77.32		
Clear days in the month.....21									
Variable—sunshine at times, .....10									
Cloudy—sun not visible,00									

REMARKS.

The thermometer indicated 98° on the 7th and 8th of this month; which is the greatest degree of heat on my record, in fifteen years, except the 13th and 27th of July, 1851, when it reached the same point. My thermometer hangs in the open air, in the shade; and I am confident that no reliable thermometer indicated a higher temperature than 98°.

The heat of the month is over the usual mean nearly

3°. The quantity of rain, much under the usual average.

The earth being so seldom relieved from the intense rays of the sun, by clouds, this month, added to the dearth of rain, has caused the soil to be much parched in this vicinity, and affected injuriously most varieties of the growing crops.

JOHN LEA.

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